HCD-GRX70/GRX70J/RXD80

SERVICE MANUAL

Photo: HCD-GRX70 (GRAY)

Canadian Model
HCD-RXD80
E Model
HCD-GRX70/GRX70J
Australian Model
HCD-GRX70

HCD-GRX70/GRX70J/RXD80 are the Amplifier, CD player, Tape Deck and Tuner section in HMC-GRX70/GRX70J/RXD80.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Mechanism	HCD-GRX50/RXD7
	CD Mechanism Type	CDM38LH-5BD32L
	Base Unit Name	BU-5BD32L
	Optical Pick-up Name	KSS-213D/Q-NP
Tape deck Section	Model Name Using Similar Mechanism	HCD-GRX50/RXD7
	Tape Transport Mechanism Type	TCM-230AWR2

SPECIFICATIONS

Amplifier section

Canadian model:
Continuous RMS power output (reference)
100 + 100 watts
(8 ohms at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07%
(8 ohms at 1 kHz, 55 W)

Other models:
The following measured at AC 120, 220, 240 V 50/60 Hz
DIN power output (rated) 130 + 130 watts
(6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
170 + 170 watts
(6 ohms at 1 kHz, 10% THD)

Inputs
MD/VIDEO (AUDIO) IN: (phono jacks) voltage 450 mV/250 mV, impedance 47 kilohms
MIX MIC: (phone jack) sensitivity 1 mV, impedance 10 kilohms

Outputs
MD OUT: (phono jacks) voltage 250 mV, impedance 1 kilohms
PHONES: (stereo mini jack) accepts headphones of 8 ohms or more
SPEAKER:
Canadian model: accepts impedance of 8 to 16 ohms
SURROUND SPEAKER (GRX70/GRX70J): accepts impedance of 16 ohms
SUPER WOOFER: Voltage 1 V, impedance 1 kilohm

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM

MICROFILM

SONY®

Specifications (continued)

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780nm) Emission duration: continuous
Laser output	Max. 44.6 μW* *This output is the value measured at distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response	2 Hz - 20 kHz (±0.5 dB)
Wavelength	780 -790 nm
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)	
Wavelength	600 nm
Output Level	-18 dBm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	40 - 13,000 Hz (±3 dB), using Sony TYPE I cassette 40 - 14,000 Hz (±3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 - 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

UKV tuner section (3 band (FM-AM-UKV) models only)

Tuning range	65.0 - 74.0 MHz Stereo Plus

AM tuner section

Tuning range	
2 Band type:	
Canadian model:	530 - 1,710 kHz (with the interval set at 10 kHz) 531 - 1,710 kHz (with the interval set at 9 kHz)
Other models:	531 - 1,602 kHz (with the interval set at 9 kHz) 530 - 1,710 kHz (with the interval set at 10 kHz)
3 Band type:	
Middle Eastern models:	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz)
SW:	5.95 - 17.90 MHz (with the interval set at 5 kHz)
Other models:	
MW:	531 - 1,602 kHz (with the interval set at 9 kHz) 530 - 1,710 kHz (with the interval set at 10 kHz)
SW:	5.95 - 17.90 MHz (with the interval set at 5 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
Canadian model:	120 V AC, 60 Hz
Mexican model:	120 V AC, 50/60 Hz
Australian model:	230 - 240 V AC, 50/60 Hz
Thai model:	220 V AC, 50/60 Hz
Other models:	120 V, 220 V, or 230 - 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	170 watts
Dimensions (w/h/d)	Approx. 280 × 340 × 395 mm ($11^1/_8 \times 13^1/_2 \times 15^5/_8$ in.)
Mass	
Canadian model:	Approx. 10.2 kg
Other models:	Approx. 10.6 kg
Supplied accessories:	AM loop antenna (1) Remote Commander (1) Batteries (2) FM lead antenna (1) Speaker cords (2) Front speaker pads (8)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

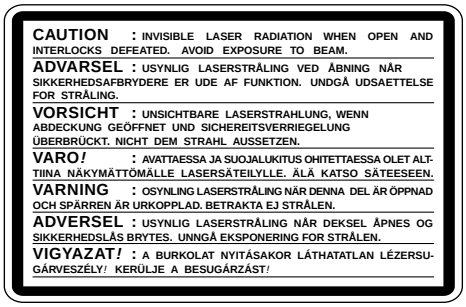
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

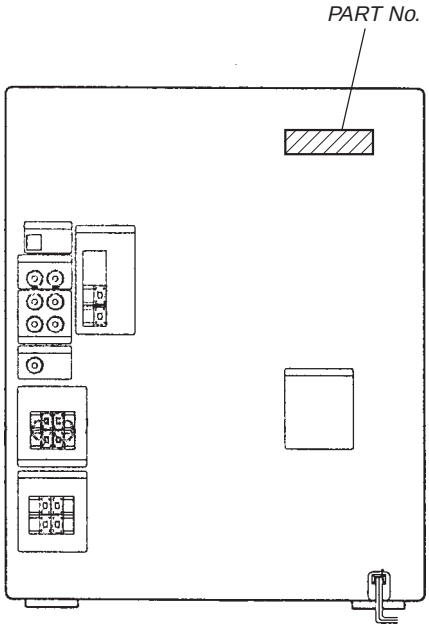
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

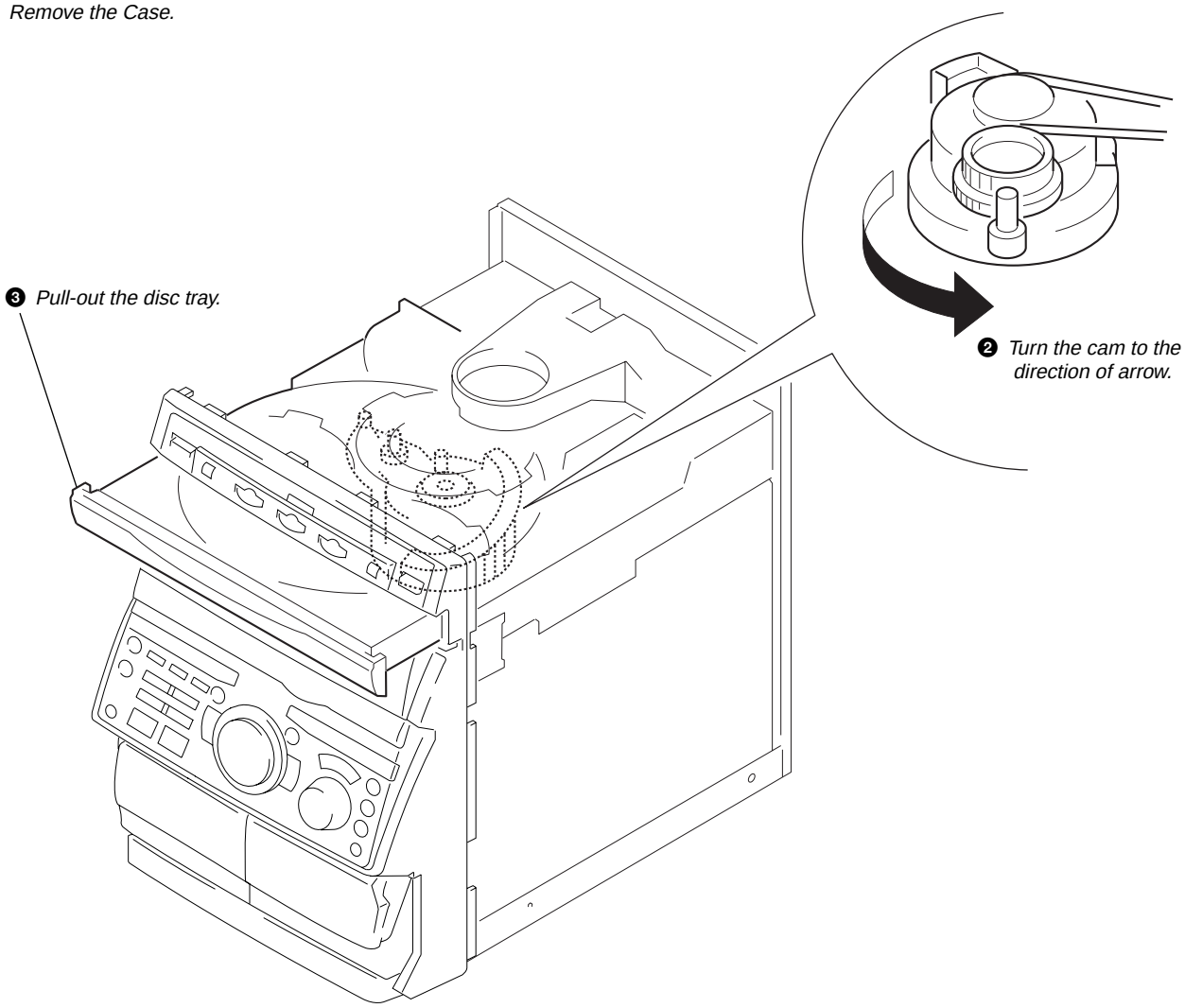
MODEL IDENTIFICATION
– Rear Panel –



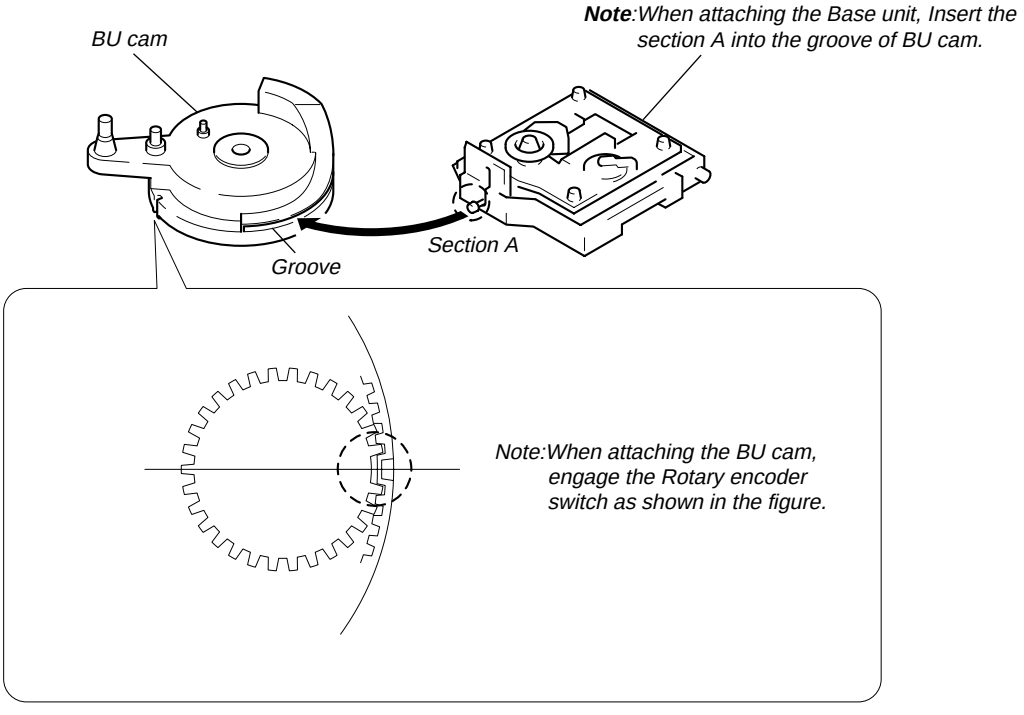
MODEL	PART No.
Thai model	4-214-456-6☐
Argentine and 120 V AC Area in E models	4-215-169-0☐
Singapore model	4-215-169-1☐
Mexican model	4-215-169-2☐
Saudi Arabia model	4-215-169-3☐
GRX70J: 240 V AC Area in E model	4-215-169-5☐
Canadian model	4-219-987-0☐
GRX70: 240 V AC Area in E model	4-219-987-2☐
Taiwan model	4-219-987-3☐
Australian model	4-219-987-4☐

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF.

❶ *Remove the Case.*



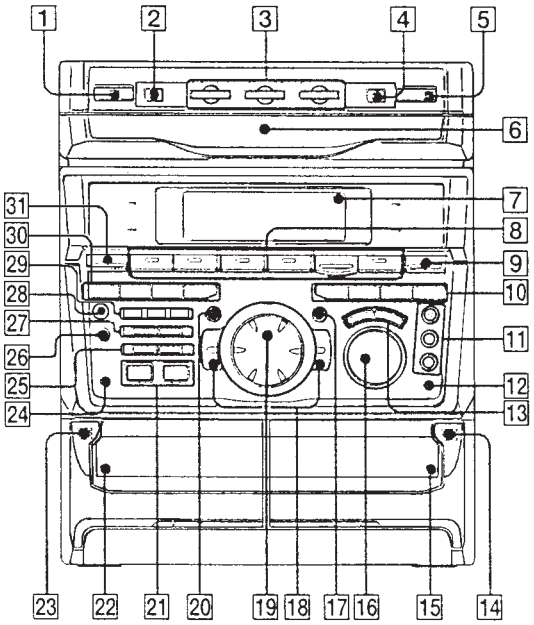
NOTE FOR INSTALLATION (ROTARY ENCODER)


BU cam
Note:When attaching the Base unit, Insert the section A into the groove of BU cam.
Section A
Groove
Note:When attaching the BU cam, engage the Rotary encoder switch as shown in the figure.

SECTION 2
GENERAL

This section is extracted from instruction manual.

LOCATION OF CONTOROLS
– Front Panel –



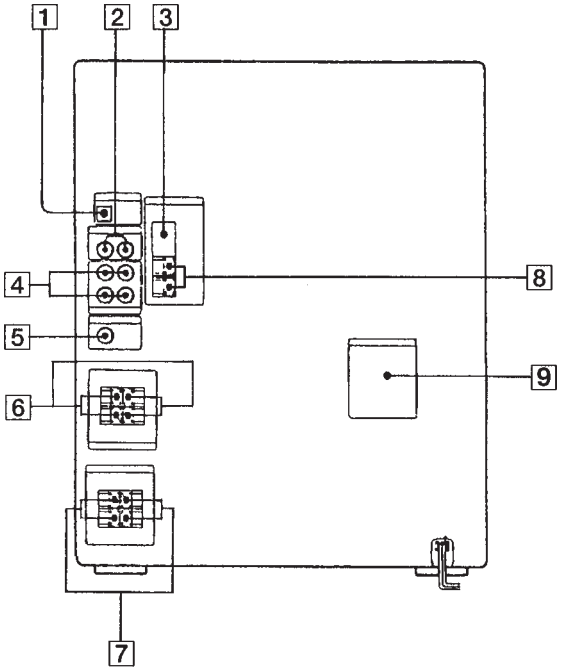
1 I / ⏻ (power) button
2 POWER SAVE/DEMO button
3 DISC 1~3 buttons
4 DISC SKIP/EXCHANGE button
5 CD ⏏ button
6 Disc tray
7 Display
8 CD/tape operating buttons:
CD ►II (play/pause)
TAPE A ► (play)
TAPE A ◄ (play)
TAPE B ► (play)
TAPE B ◄ (play)
■ (stop)
9 TUNER/BAND button
10 NON-STOP button
KARAOKE PON/MPX button
SYNC EQ button
SYNC BASS button

11 Operationg buttons for recording:
REC PAUSE/START button
HI-DUB button
CD SYNC button
12 PHONES jack
13 DBFB button
SURROUND button
14 Deck B ⏏ button
15 Deck B
16 VOLUME control
17 ENTER/NEXT button
18 ◄◄/►►, +/– buttons
19 Jog dial
20 GROOVE button
21 Operating buttons for DJ Effects:
LOOP button
FLASH button

22 Deck A
23 Deck A ⏏ button
24 MIX MIC jack
25 Clock/timer operating buttons:
CLOCK/TIMER set button
TIMER SELECT button
26 MIC LEVEL control
27 DISPLAY button
SPECTRUM ANALYZER button
28 ECHO LEVEL control
(Saudi Arabia model)

29 EDIT, DIRECTION, TUNER MEMORY button
PLAY MODE, DOLBY NR button
REPEAT, STEREO/MONO button
30 EFFECT button
FILE SELECT button
GEQ CONTROL button
P FILE MEMORY button
31 FUNCTION button

– Rear Panel –



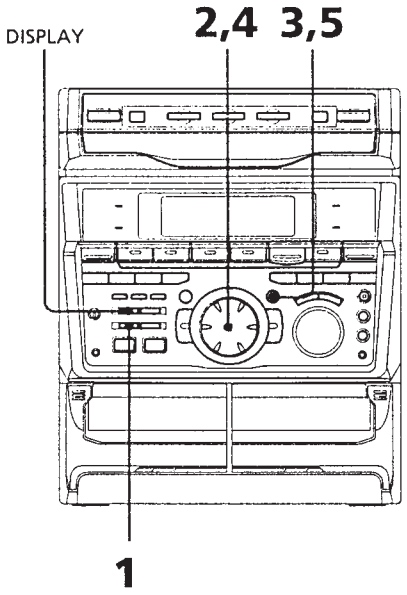
1 CD DIGITAL OUT terminal
2 VIDEO (AUDIO) IN jack
3 FM ANTENNA terminal
4 MD IN/OUT jack
5 SUPER WOOFER jack
6 SURROUND SPEAKER terminal (GRX70/GRX70J)
7 SPEAKER terminal
8 AM ANTENNA terminal
9 VOLTAGE SELECTOR switch
(GRX70: 120 V AC Area in E, 240 V AC Area in E, Saudi Arabia, Singapore, Taiwan, Argentine models)

Step 2: Setting the time

You must set the time before using the timer functions.

The clock is on a 24-hour system for the European model, and a 12-hour system for other models.

The 24-hour system model is used for illustration purposes.



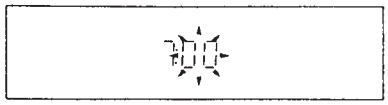
1 Press CLOCK/TIMER SET.
The hour indication flashes.

2 Turn the jog dial to set the hour.

continued

Step 2: Setting the time (coninued)

3 Press ENTER/NEXT.
The minute indication flashes.



4 Turn the jog dial to set the minute.

5 Press ENTER/NEXT.
The clock starts working.

Tip

If you've made a mistake, start over from step 1.

To change the time

The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

1 Press CLOCK/TIMER SET.
2 Turn the jog dial to select SET CLOCK.
3 Press ENTER/NEXT.
4 Perform steps 2 through 5 above.

Note

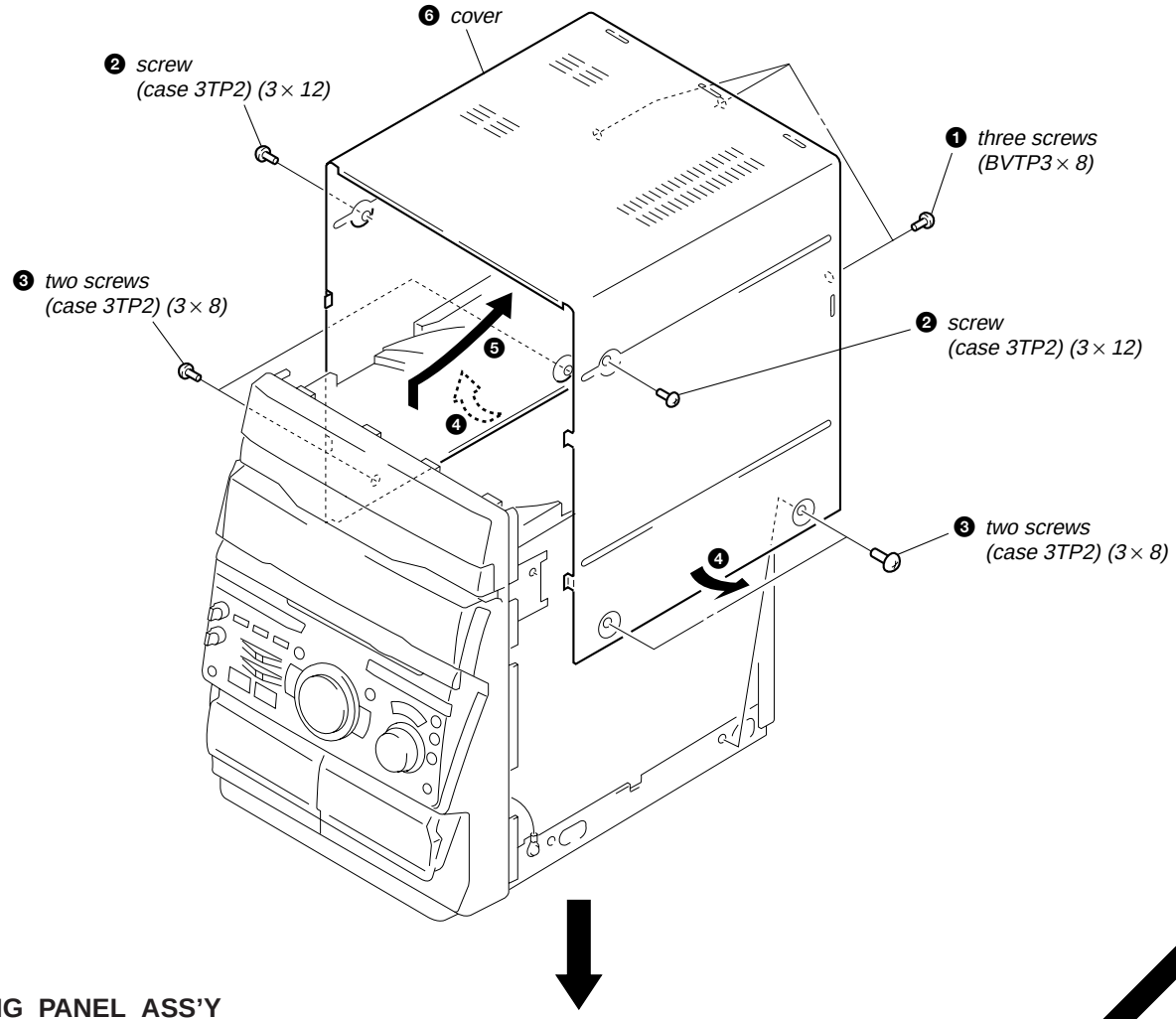
The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

7 8

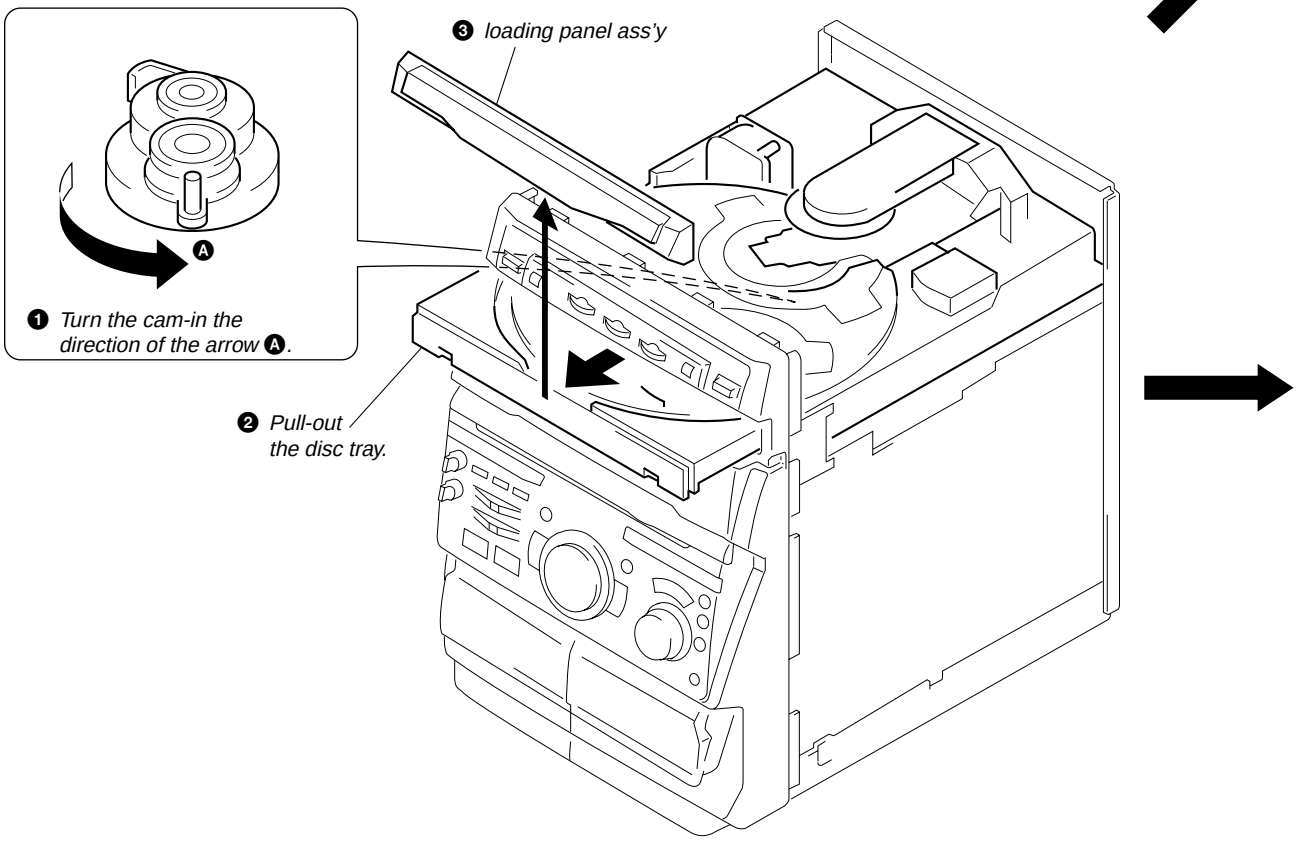
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

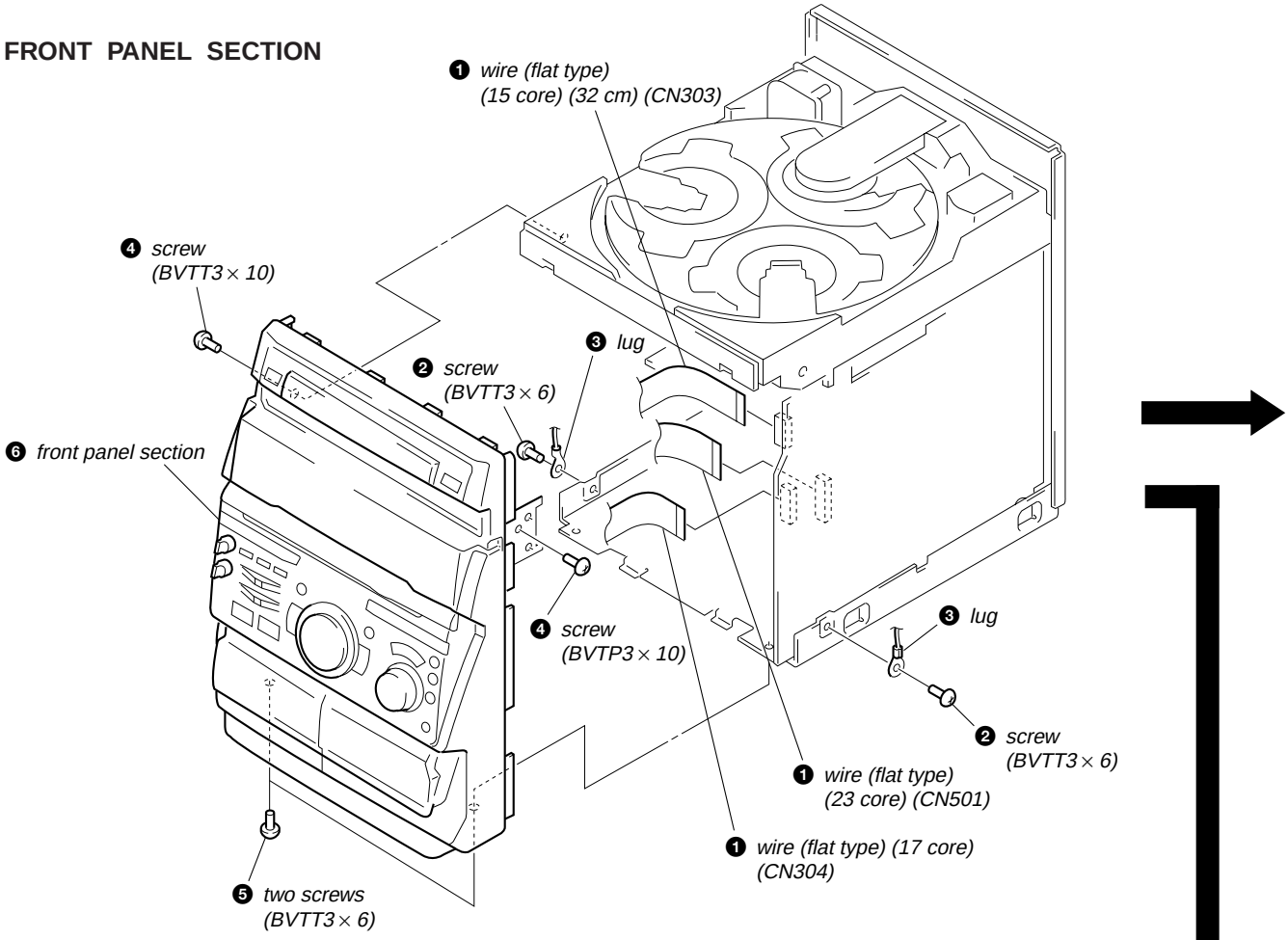
COVER



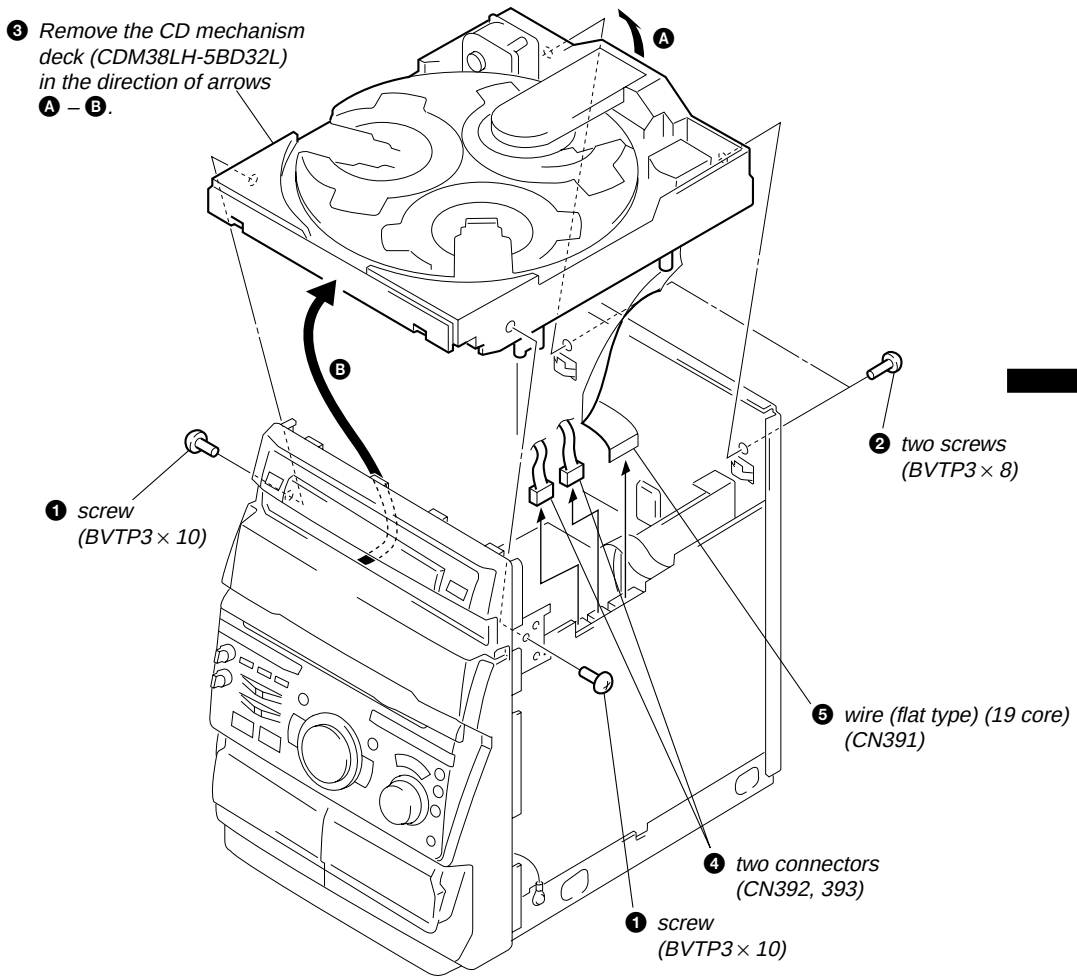
LOADING PANEL ASS'Y



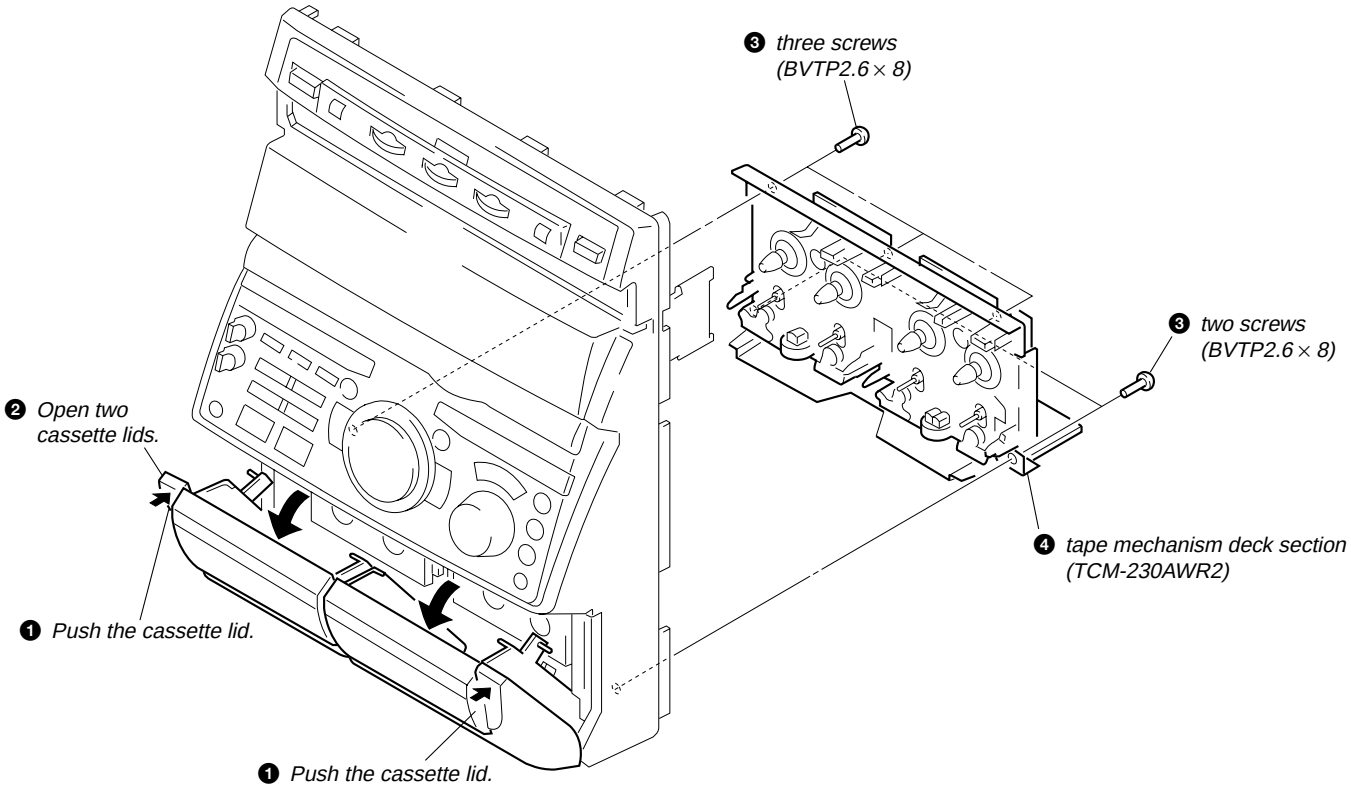
FRONT PANEL SECTION



CD MECHANISM DECK SECTION (CDM38LH-5BD32L)

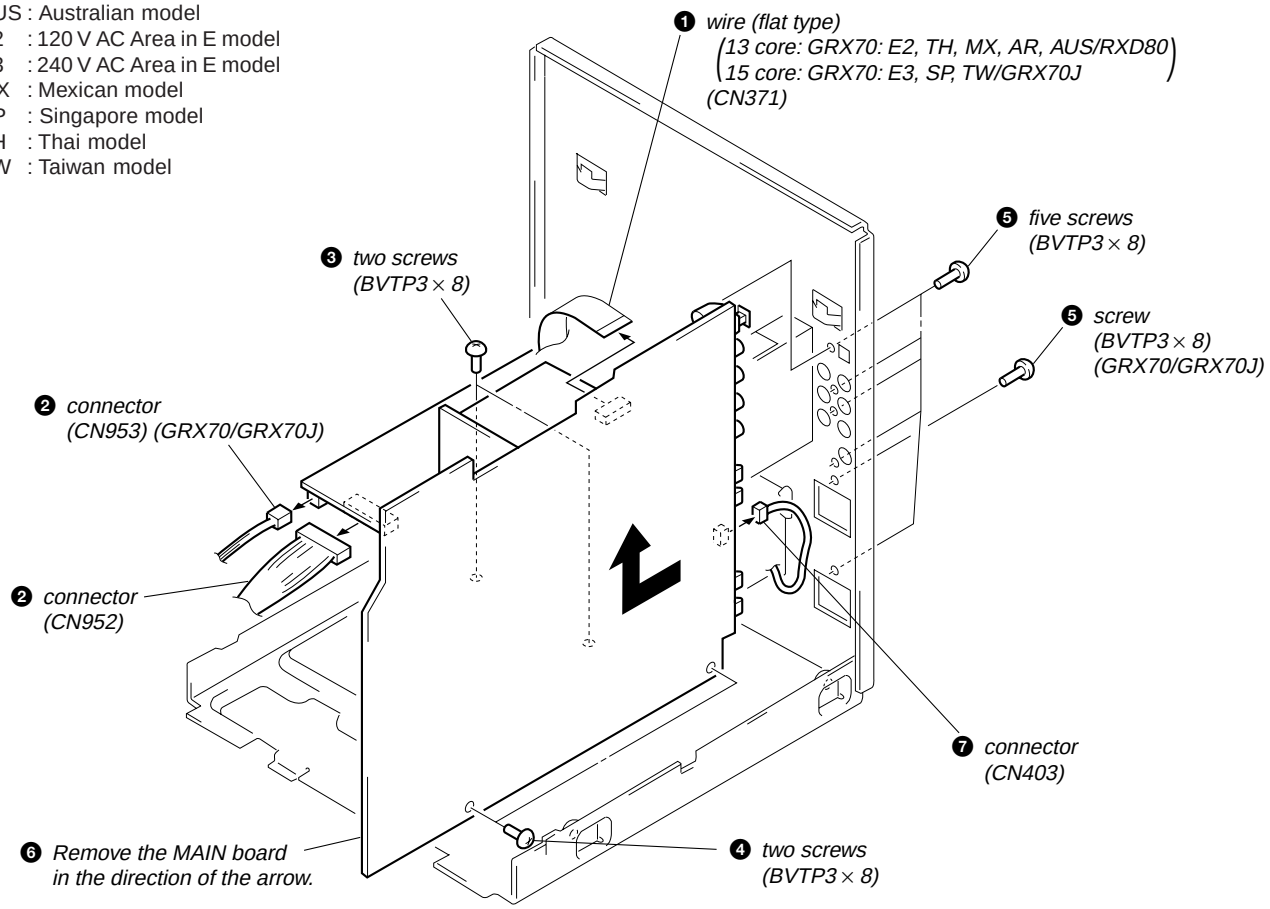


TAPE MECHANISM DECK SECTION (TCM-230AWR2)


❸ three screws (BVTP2.6 × 8)
❸ two screws (BVTP2.6 × 8)
❷ Open two cassette lids.
❹ tape mechanism deck section (TCM-230AWR2)
❶ Push the cassette lid.
❶ Push the cassette lid.

MAIN BOARD

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  E2 : 120 V AC Area in E model
  E3 : 240 V AC Area in E model
  MX : Mexican model
  SP : Singapore model
  TH : Thai model
  TW : Taiwan model


❶ wire (flat type)
(13 core: GRX70: E2, TH, MX, AR, AUS/RXD80
15 core: GRX70: E3, SP, TW/GRX70J
(CN371)
❺ five screws (BVTP3 × 8)
❸ two screws (BVTP3 × 8)
❺ screw (BVTP3 × 8) (GRX70/GRX70J)
❷ connector (CN953) (GRX70/GRX70J)
❷ connector (CN952)
❼ connector (CN403)
❻ Remove the MAIN board in the direction of the arrow.
❹ two screws (BVTP3 × 8)

SECTION 4
TEST MODE

[MC Cold Reset]

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Turn the power ON or set to the DEMO mode.
2. Press three buttons of [■], [ENTER/NEXT], and [I/⏻] simultaneously.
3. The set is reset, and displays “COLD RESET”, then becomes DEMO mode.

[MC Hot Reset]

• This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Turn the power ON or set to the DEMO mode.
2. Press three buttons of [■], [ENTER/NEXT], and [DISC 1] simultaneously.
3. The set is reset, and becomes standby state.

[Change-over the AM Tuning Interval] (EXCEPT Saudi Arabia model)

• The AM tuning interval can be changed over 9 kHz or 10 kHz.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Select the function “TUNER”, and press the [TUNER/BAND] button to select the BAND “AM”.
3. Press the [I/⏻] button to turn the power OFF.
4. Press the [ENTER/NEXT] and [I/⏻] buttons simultaneously, and the display on the fluorescent indicator tube changes to “AM 9 k STEP” or “AM 10 k STEP”, and thus the tuning interval is changed over.

[CD Delivery Mode]

• This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Press the [LOOP] and [I/⏻] buttons simultaneously.
3. A message “LOCK” is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons of [■], [ENTER/NEXT], and [DISC 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
   Press the [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays “K 0 J0 V0”. Each time a button is pressed, “K” value increases. However, once a button is pressed, it is no longer taken into account.
   “J” value increases like 1, 2, 3 ... if turn the JOG dial clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
   “V” value increases like 1, 2, 3 ... if turn the [VOLUME] dial clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[CD Service Mode]

• This mode can run the CD sled motor optionally. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press the [I/⏻] button to turn the power ON.
2. Select the function “CD”.
3. Press three buttons of [■], [ENTER/NEXT], and [⏏] simultaneously.
4. Set to the Sled Servo mode.
5. With the CD in stop status, turn the JOG dial clockwise to move the optical pick-up to outside track, or turn it counterclockwise to inside track.
6. To exit from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Disconnect the power cord.

Notes:
- Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

CD section and tape deck section work in parallel.

- If an error occurred:
  The aging operation stops only an error occurred sections and display then status.
- If no error occurs:
  The aging operation continues repeatedly.

Procedure:

1. Set disc in DISC1 tray.
2. Load the tapes into the decks A and B respectively.
3. Press the [PLAY MODE] button to set the "ALL DISCS" mode, and press the [REPEAT] button to "REPEAT" off.
4. Press the [FUNCTION] button to select the function "CD".
5. Press three buttons of [■] , [ENTER/NEXT], and [DISC SKIP/EX-CHANGE] simultaneously.
6. The aging mode is activated, if the indicator of disc tray number on the fluorescent indicator tube is blinking.
7. To exit from the aging mode, press the [I/⏻] button to turn the power OFF and operate the cold reset. (Refer to the "MC Cold Reset")

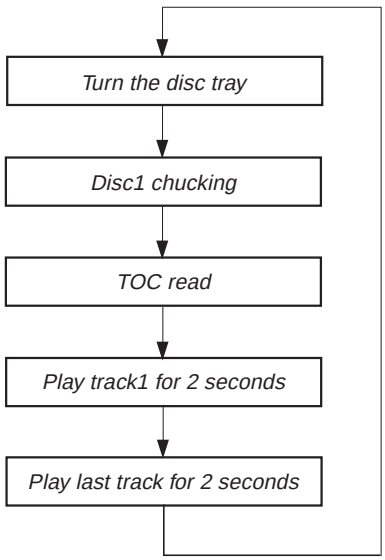
1. Display at the Aging Mode

- Display operating state of CD section and tape deck section alternately.
- If an error occurred, stop display which that section.

2. CD Section

- Display at the aging mode is the same as the normal operation.
- The sequence during the aging mode is following as below.

Aging mode sequence (CD section) :



- Display at an error occurred

1) Display of the error count

(1) Press three buttons of [■] , [ENTER/NEXT], and [CD SYNC] simultaneously.

(2) Display of the error count following as below.

Display

EMC**EDC**

Notes:

EMC**: The number of mechanical error.

EDC** : The number of no disc error after chucking the disc.

2) Display of mechanical error

Display

E**M##$$&&

Notes:

**: The number of mechanical error.("00" is latest one)
(Press the [PLAY MODE] button to changes next error display)

: Not used.

$$: Loading error. (Second figure is not used)
- D : The error in the midst of close at the except mechanical trouble.
- E : The error in the midst of open at the except mechanical trouble.
- C : The error in the midst of chuck up at the except mechanical trouble.
- F : The error in the midst of EX-open at the except mechanical trouble.

&&: Loading error. (Second figure in not used)
- 1: The error in the midst of chuck up.
- 2: The error in the midst of chuck down.
- 3: Time up of EX-open
- 4: Time up of EX-close.

3) Display of no disc error

Display

E**D##$$&&

Notes:

**: The number of mechanical error.("00" is latest one)
(Press the [REPEAT] button to changes next error display)

##:
- 01: Focus error
- 02: GFS error
- 03: Set up error

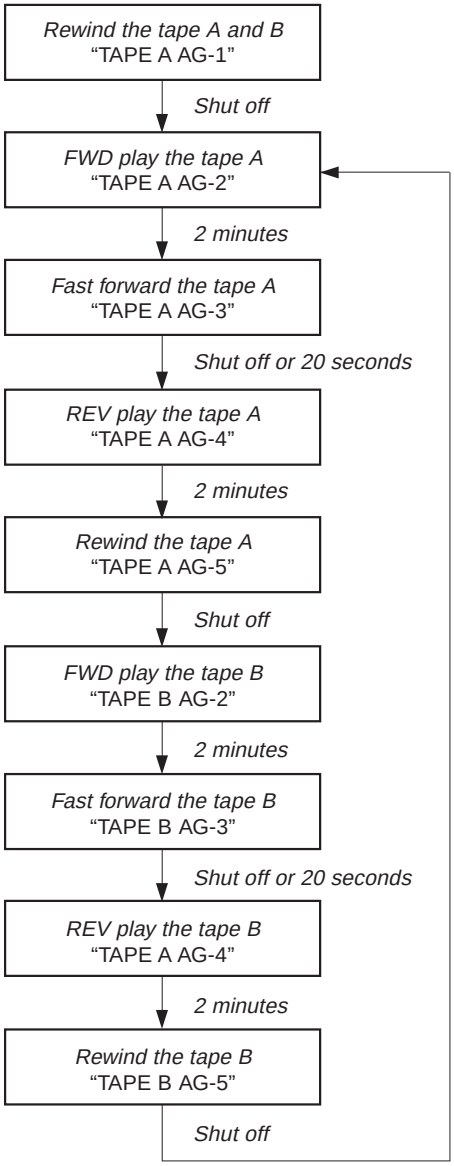
$$:
- 00: No disc error when does not chucking retry.
- 02: No disc error when chucking retry to completion.

&&: The state when judged no disc error. (Second figure is not used)
- 1: Stop
- 2: Set up
- 3: TOC read
- 4: Access
- 5: Play
- 6: Pause
- 7: Manual search (Play)
- 8: Manual search (Pause)

3. Tape Deck Section

- The sequence during the aging mode is following as below.
- If an error occurred, stop display that step.

Aging mode sequence (Tape deck section) :



Note: "TAPE ∗ AG-∗" is display of each step.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads, erase head, capstan, pinch rollers, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.03 – 0.08 oz • inch)
REV	CQ-102RC	31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.03 – 0.08 oz • inch)
FF/REW	CQ-201B	71 to 143 g • cm (0.99 – 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to the DOLBY NR OFF.
9. Set to the test mode.
   (1) Press the I/⏻ button to turn the power ON.
   (2) Select the function "TAPE A or B".
   (3) Press the button of ■ , ENTER/NEXT, and DISC 3 simultaneously, to set the tape deck test mode and blink the indicator of disc tray number on the fluorescent indicator tube.
   (4) To exit from the test mode, press the I/⏻ button.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

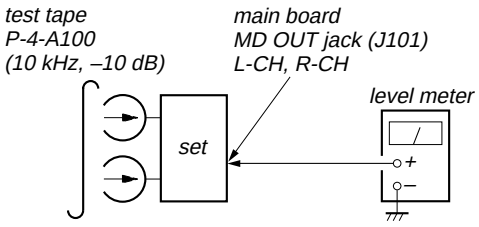
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

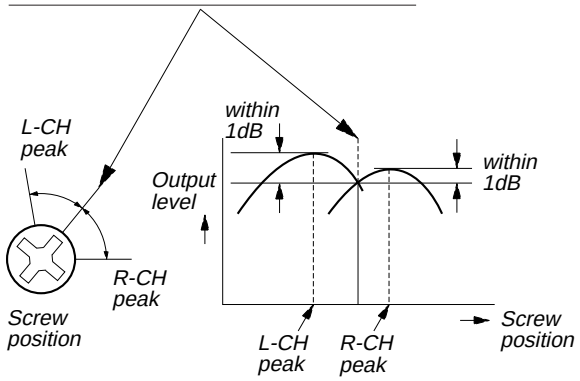
Note: Perform this adjustments for both decks

Procedure:

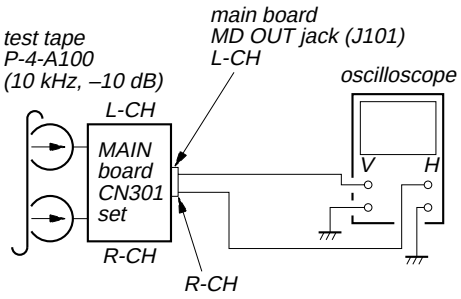
1. Mode: Playback

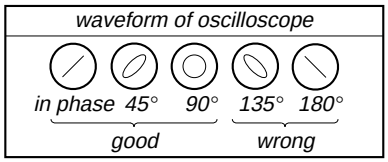


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



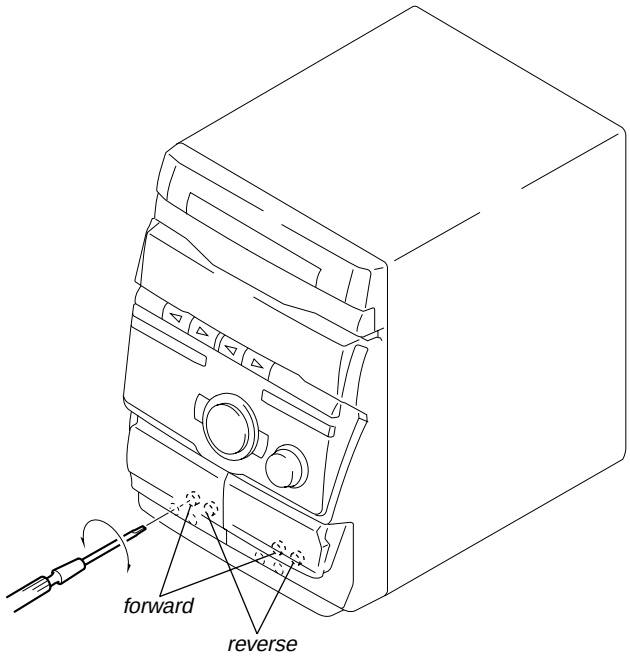
3. Mode: Playback





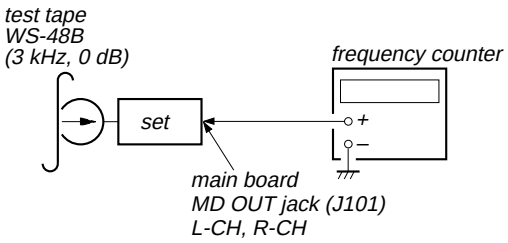
4. Repeat step 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



Tape Speed Adjustment DECK B

Mode: Playback

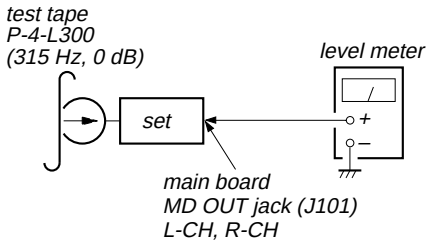


1. Insert the WS-48B into the deck B.
2. Press the ▶ button on the deck B.
3. Press the HI-DUB button in playback mode.
   Then at HIGH speed mode.
4. Adjust RV1001 on the LEAF SW board do that frequency counter reads 6,000 ± 180 Hz.
5. Press the HI-DUB button.
   Then back to NORMAL speed mode.
6. Adjust RV1002 on the LEAF SW board so that frequency counter reads 3,000 ± 90 Hz.

Adjustment Location: LEAF SW board
Sample value of Wow and Flutter: 0.3% or less W.RMS (JIS)
(WS-48B)

Playback level Adjustment DECK A DECK B

Procedure:
Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

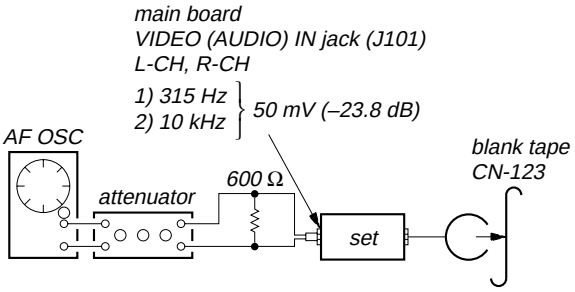
Adjustment Level:
J101 PB level: 301.5 to 338.3 mV (–8.2 to –7.2 dB) level difference between the channels: within ±0.5 dB

Adjustment Location: AUDIO board

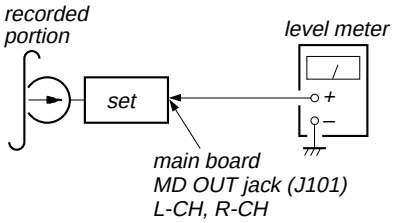
REC Bias Adjustment DECK B

Procedure:

1. Mode: Record
   FUNCTION: VIDEO



2. Mode: Playback



3. Confirm playback the signal recorded in step 1 become specification values as follows.
   If these values are out of specification values, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1and 2.

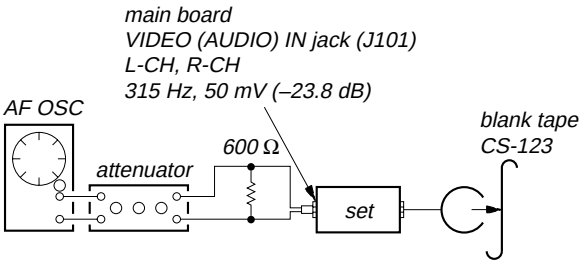
Specification values: Playback output of 315 Hz to playback output of 10 kHz: ± 0.5 dB

Adjustment Location: AUDIO board

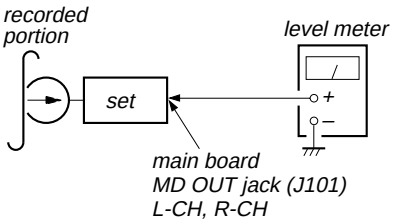
REC Level Adjustment DECK B

Procedure:

1. Mode: Record
   FUNCTION: VIDEO



2. Mode: Playback

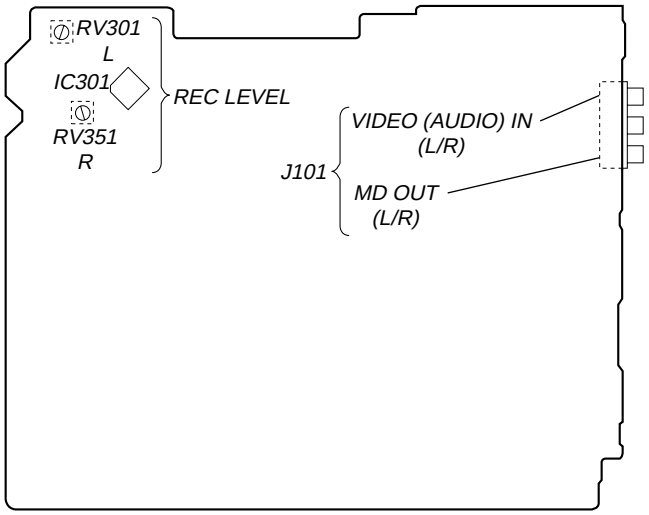


3. Confirm playback the signal recorded in step 1 become specification values as follows.
   If these values are out of specification values, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 1 and 2.

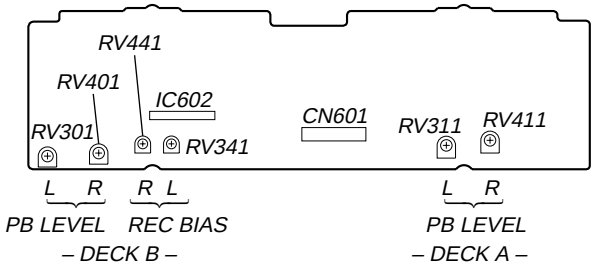
Specification values:
J101 PB level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location: MAIN board

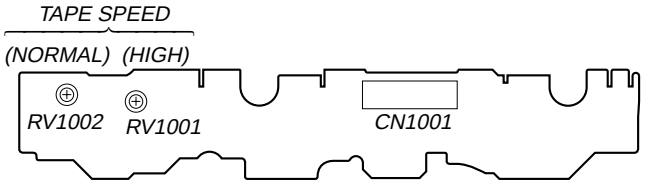
– MAIN BOARD (Conductor Side) **–**



– AUDIO BOARD (Component Side) **–**



– LEAF SW BOARD (Component Side) **–**

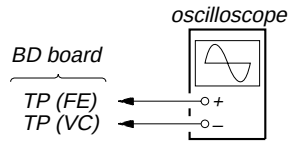


CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

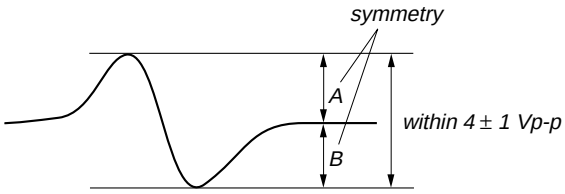
S-Curve Check



Procedure:

1. Connect oscilloscope to TP (FE).
2. Connect between TP (FE1) and TP (VC) by lead wire.
3. Connect between TP (AGCCON) and TP (GND) by lead wire.
4. Turn the power ON.
5. Load a disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
6. Cofirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 4 ± 1 Vp-p.

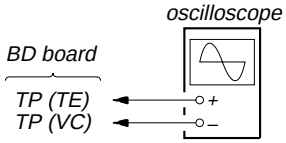
S-curve waveform



7. After check, remove the lead wire connected in step 2 and 3.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

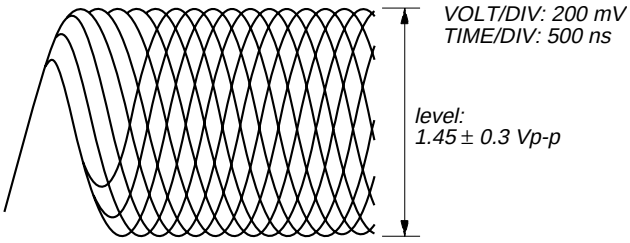
RF Level Check



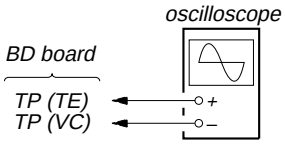
Procedure:

1. Connect oscilloscope to TP (RF).
2. Connect between TP (AGCCON) and TP (GND) by lead wire.
3. Turn the power ON.
4. Load a disc (YEDS-18) and playback.
5. Confirm that the oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

Note: Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.



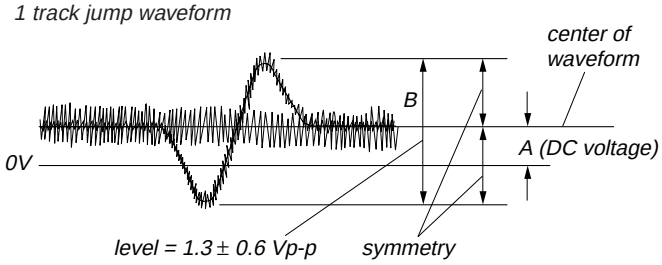
E-F Balance (1 Track Jump) Check



Procedure :

1. Connect oscilloscpe to TP (TE) and TP (VC).
2. Turn the power ON.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the ▶II (CD) button. (Becomes the 1 track jump mode)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

1 track jump waveform

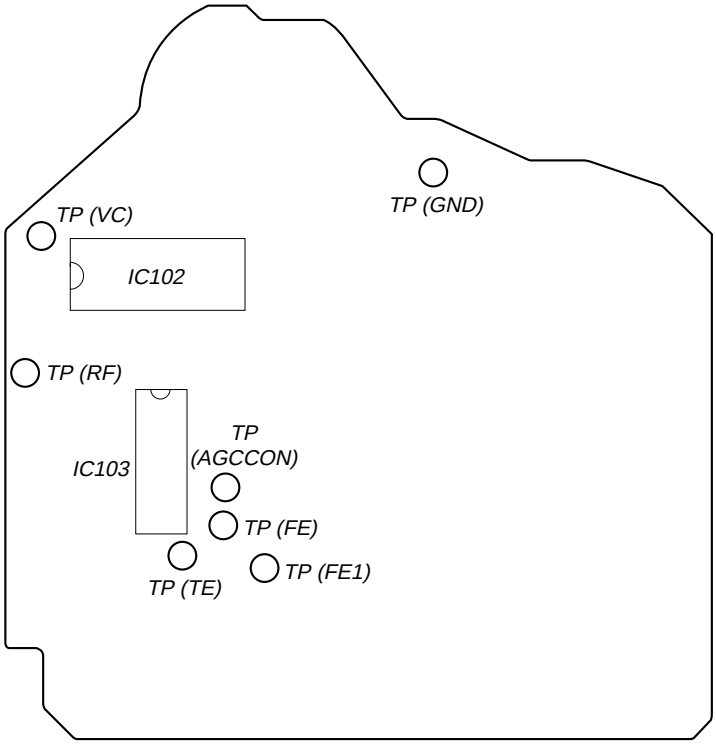


Specified level: $\frac{A}{B} \times 100$ = less than ± 22%

6. After check, remove the lead wire connected in step 1.

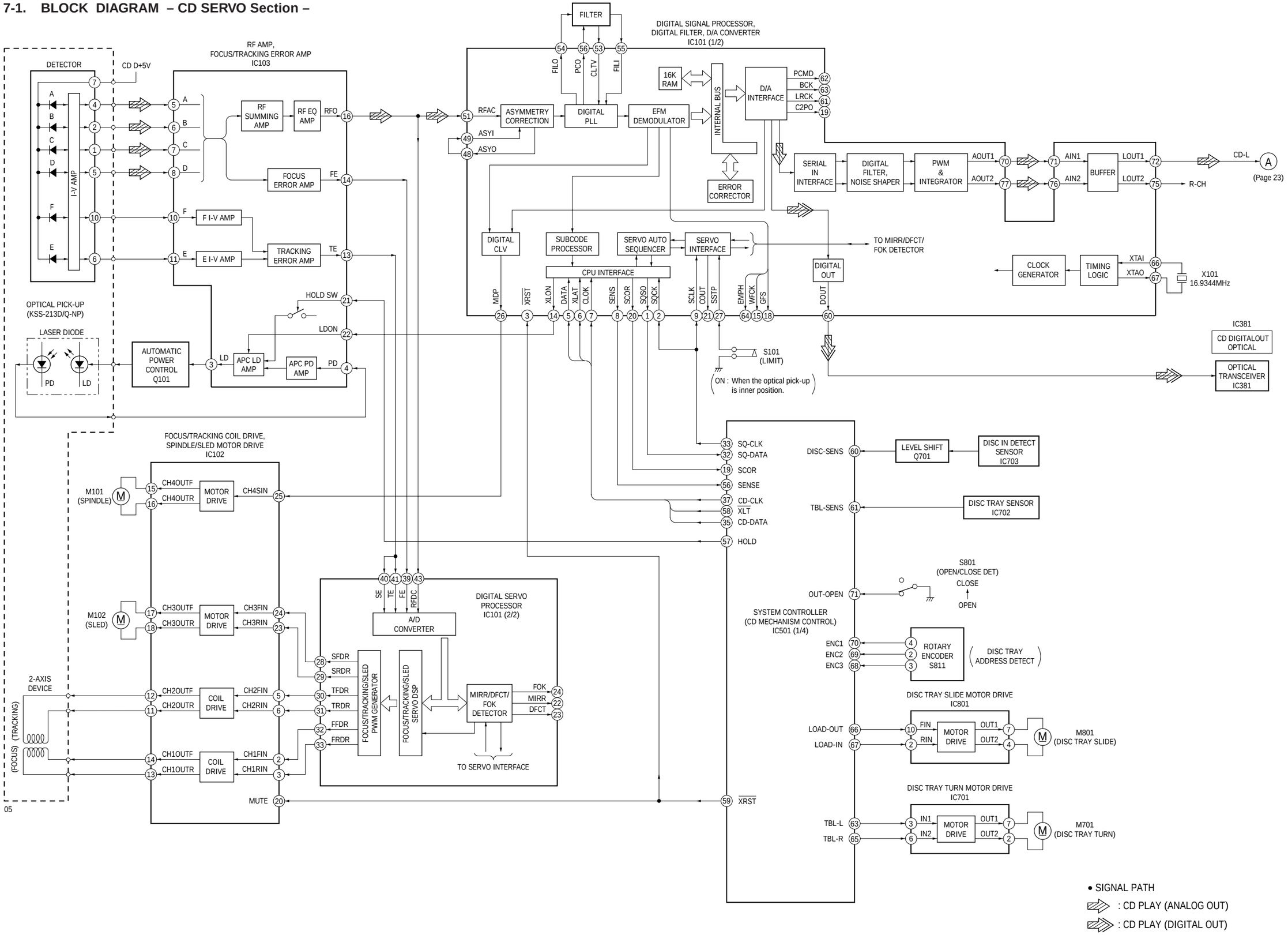
Checking Location:

– BD BOARD (Side B) **–**

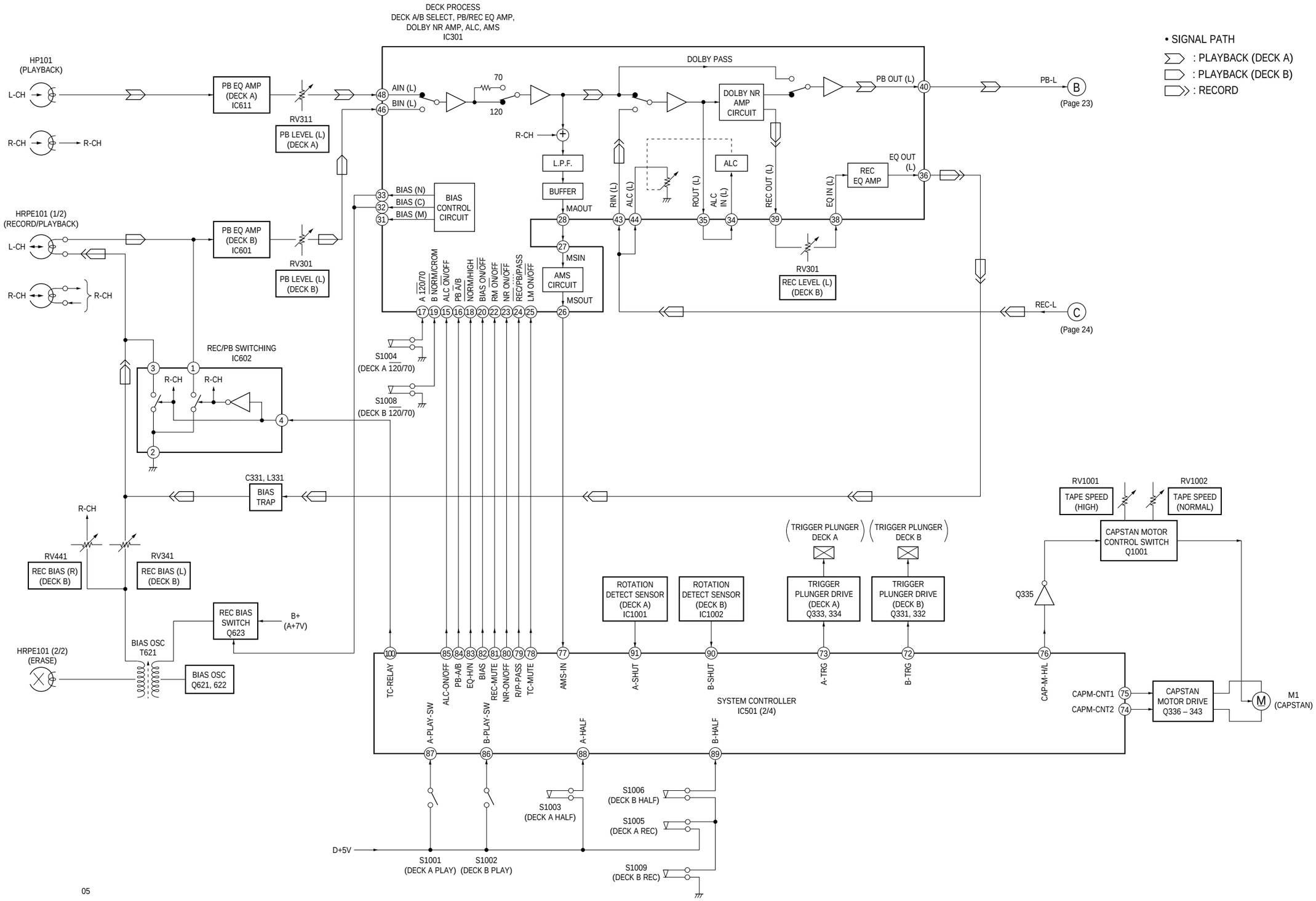


SECTION 7
DIAGRAMS

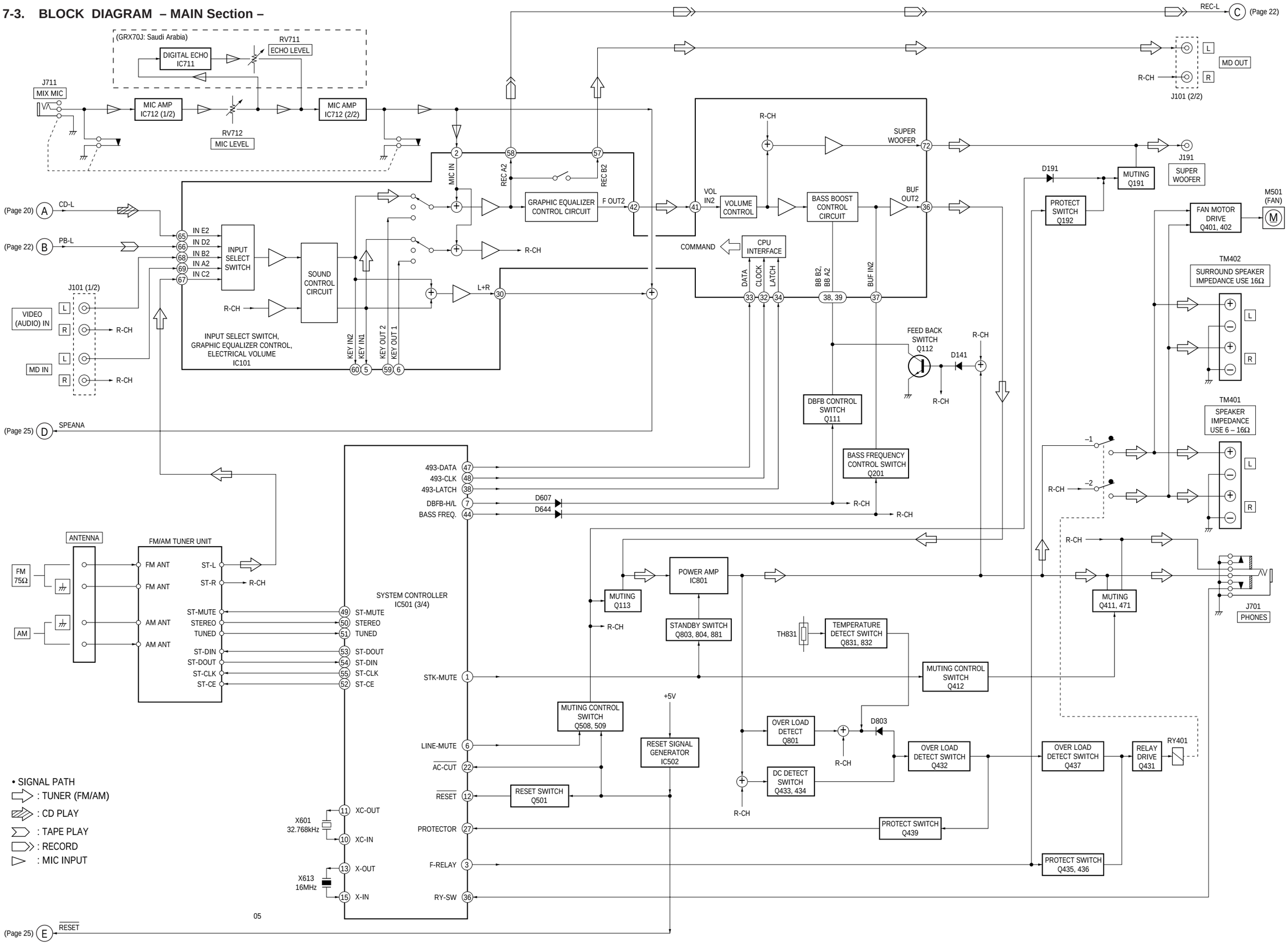
7-1. BLOCK DIAGRAM – CD SERVO Section –



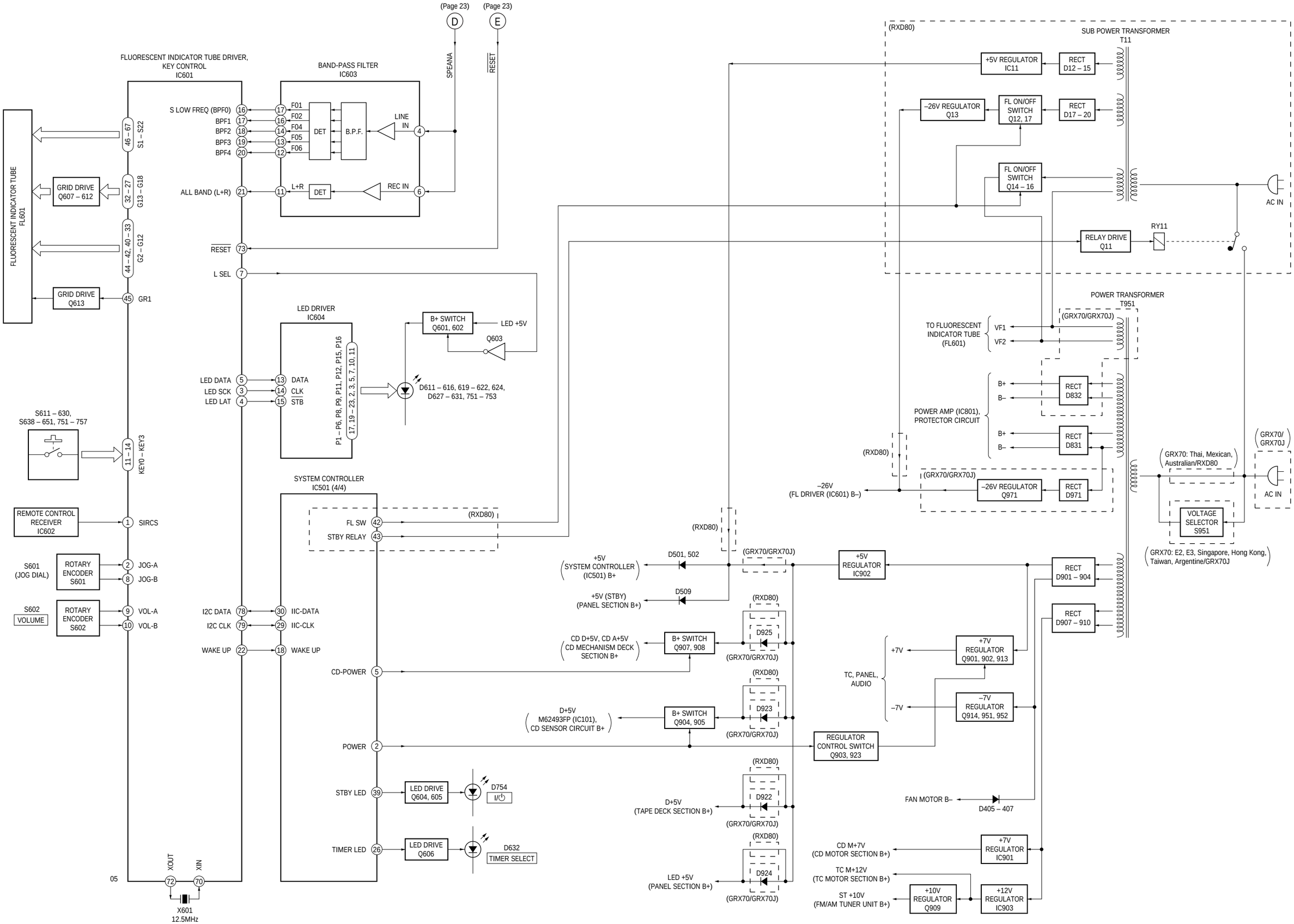
7-2. BLOCK DIAGRAM – TAPE DECK Section –



7-3. BLOCK DIAGRAM – MAIN Section –



7-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL/POWER SUPPLY Section –



7-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

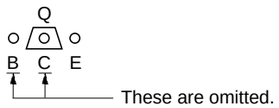
Note on Printed Wiring Board:

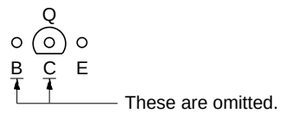
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transisitor.





Note on Schematic Diagram:

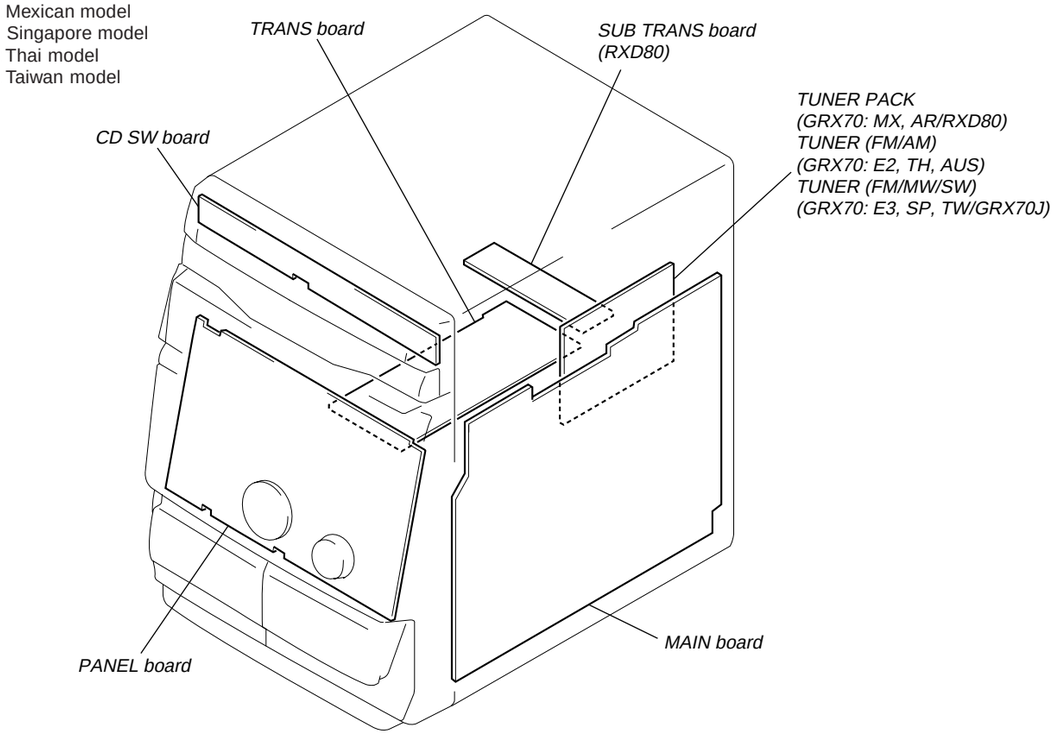
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

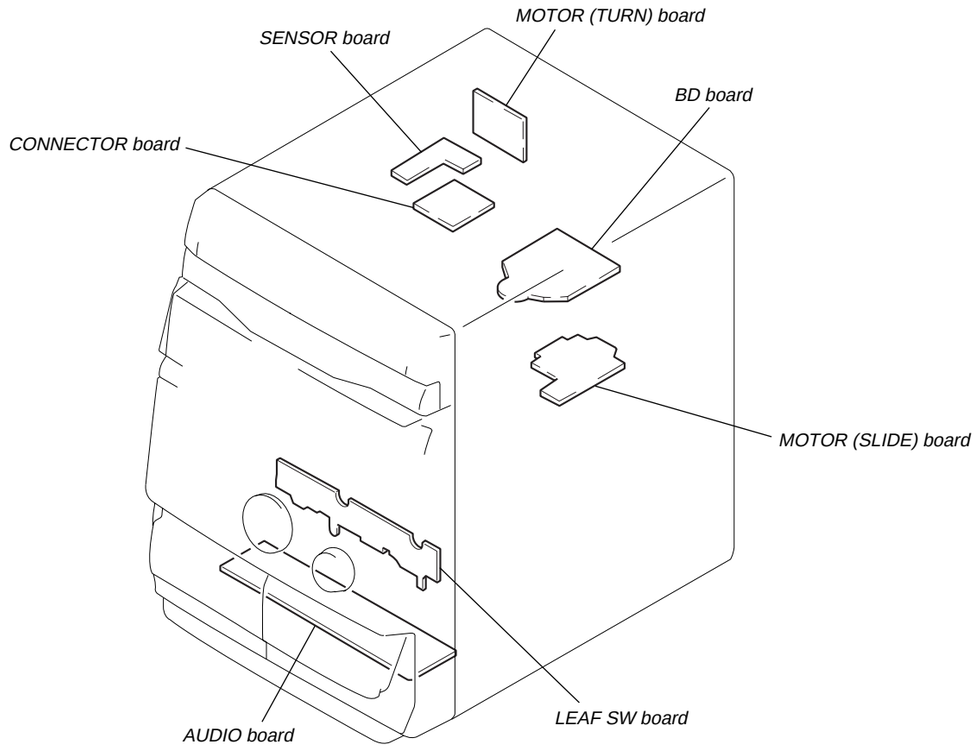
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B– Line.
- : adjustment for repair.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : TUNER (FM/AM)
  - : PLAYBACK (DECK A)
  - : PLAYBACK (DECK B)
  - : RECORD
  - : CD PLAY (ANALOG OUT)
  - : CD PLAY (DIGITAL OUT)
  - : MIC INPUT
- Abbreviation
  - AR : Argentine model
  - AUS : Australian model
  - CND : Canadian model
  - E2 : 120 V AC Area in E model
  - E3 : 240 V AC Area in E model
  - EA3 : Saudi Arabia model
  - MX : Mexican model
  - SP : Singapore model
  - TH : Thai model
  - TW : Taiwan model

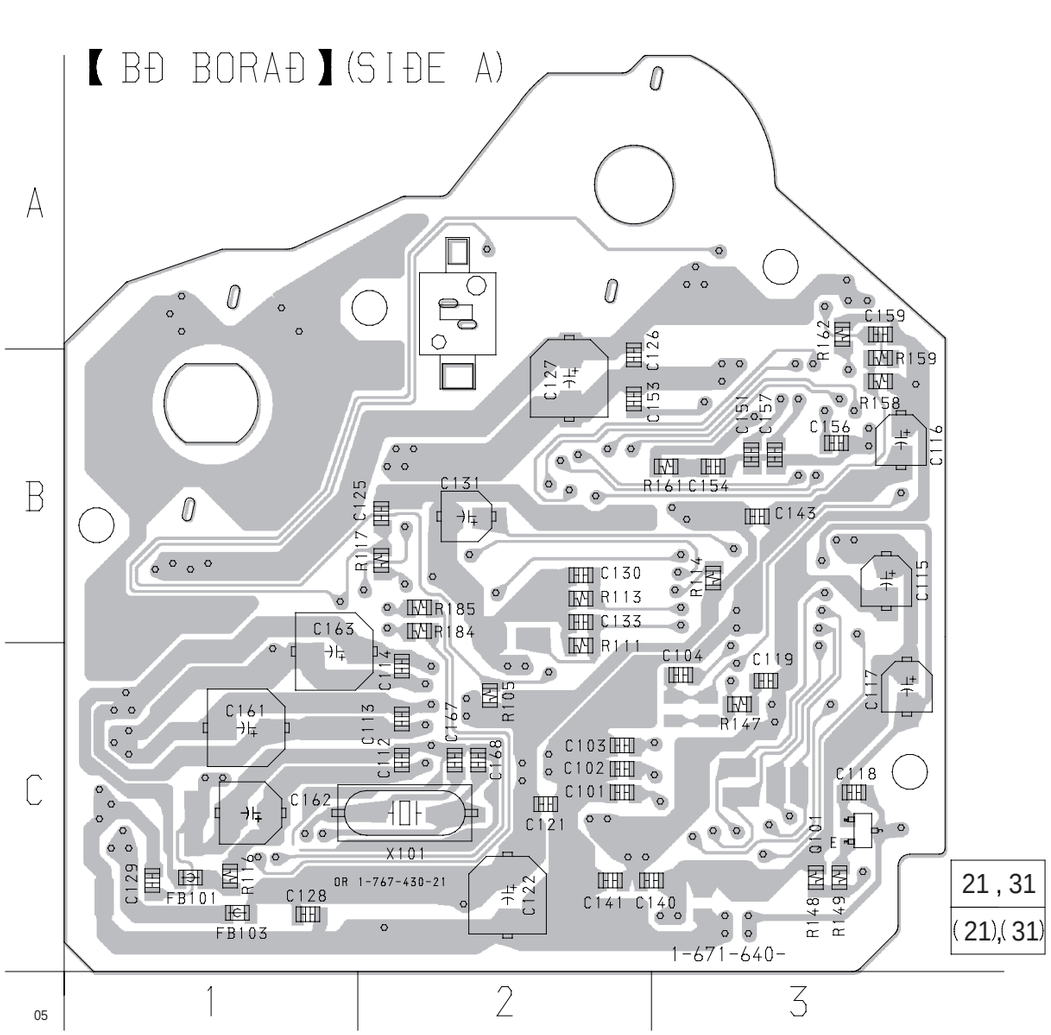
• Circuit Boards Location

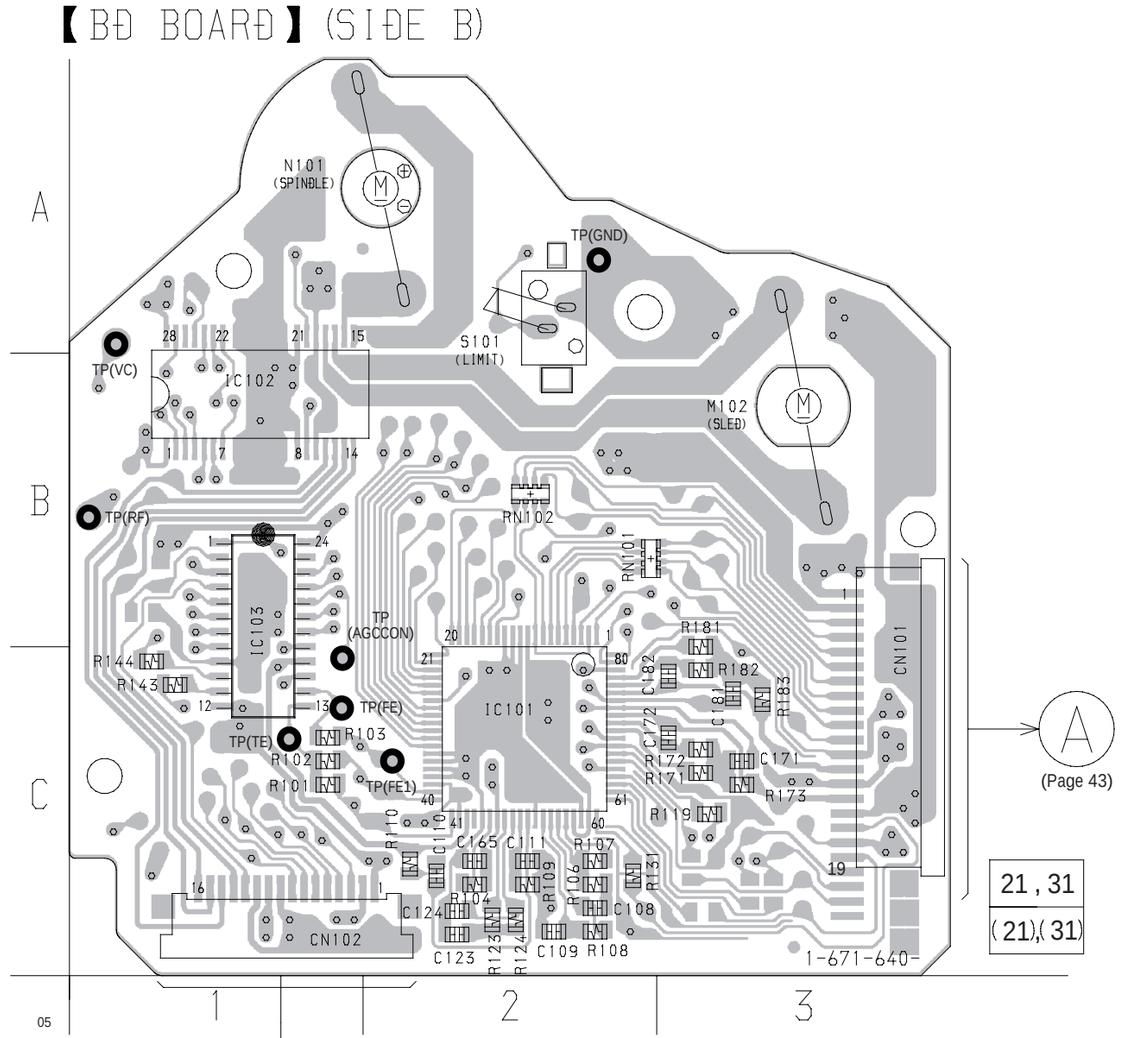
- Abbreviation
  - AR : Argentine model
  - AUS : Australian model
  - E2 : 120 V AC Area in E model
  - E3 : 240 V AC Area in E model
  - MX : Mexican model
  - SP : Singapore model
  - TH : Thai model
  - TW : Taiwan model





7-6. PRINTED WIRING BOARD – BD Board – • See page 28 for Circuit Boards Location.





- **Semiconductor Location (Side A)**

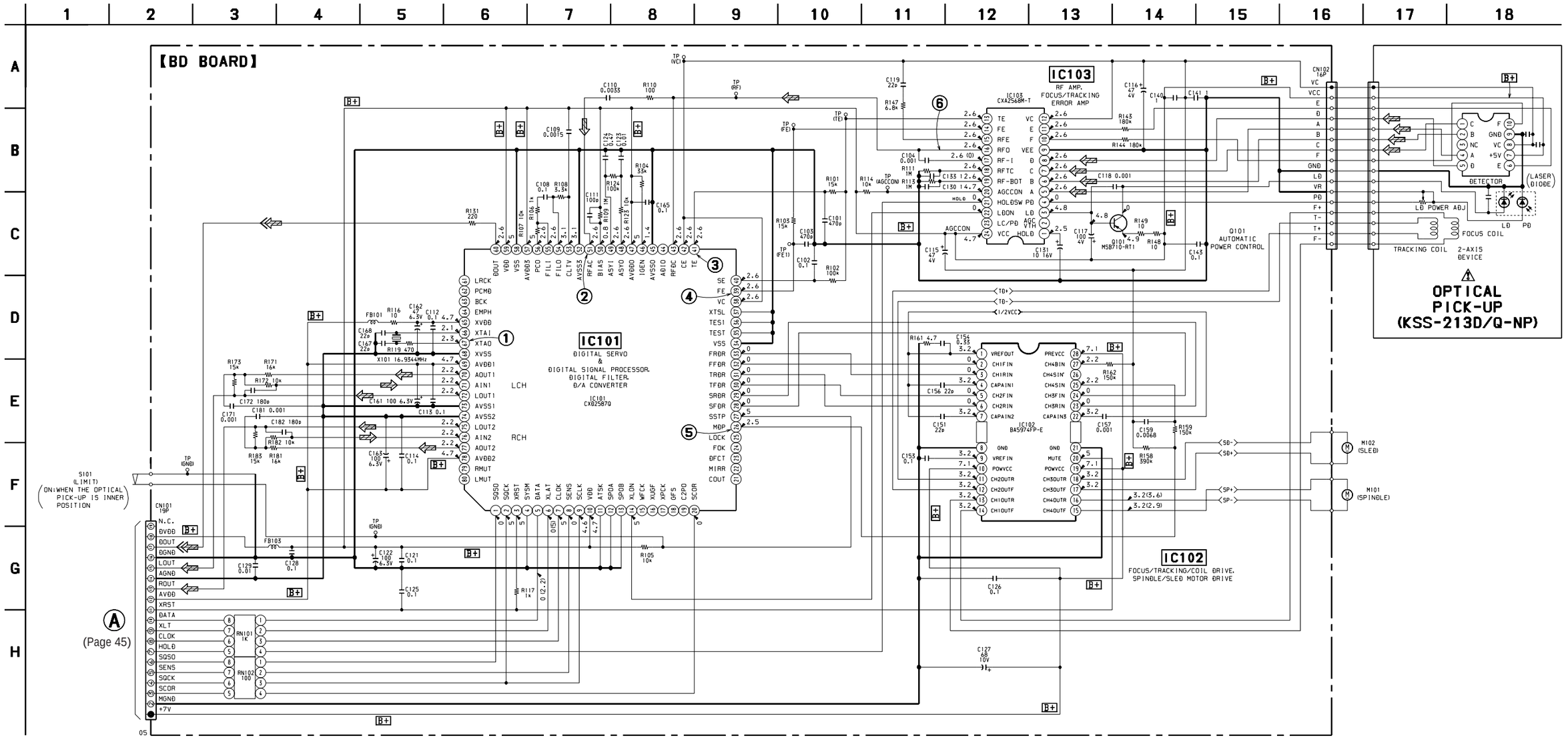
Ref. No.	Location
Q101	C-3

- **Semiconductor Location (Side B)**

Ref. No.	Location
IC101	C-2
IC102	B-1
IC103	B-1

7-7. SCHEMATIC DIAGRAM – BD Board –

• See page 59 for Waveforms. • See page 64 for IC Block Diagrams.

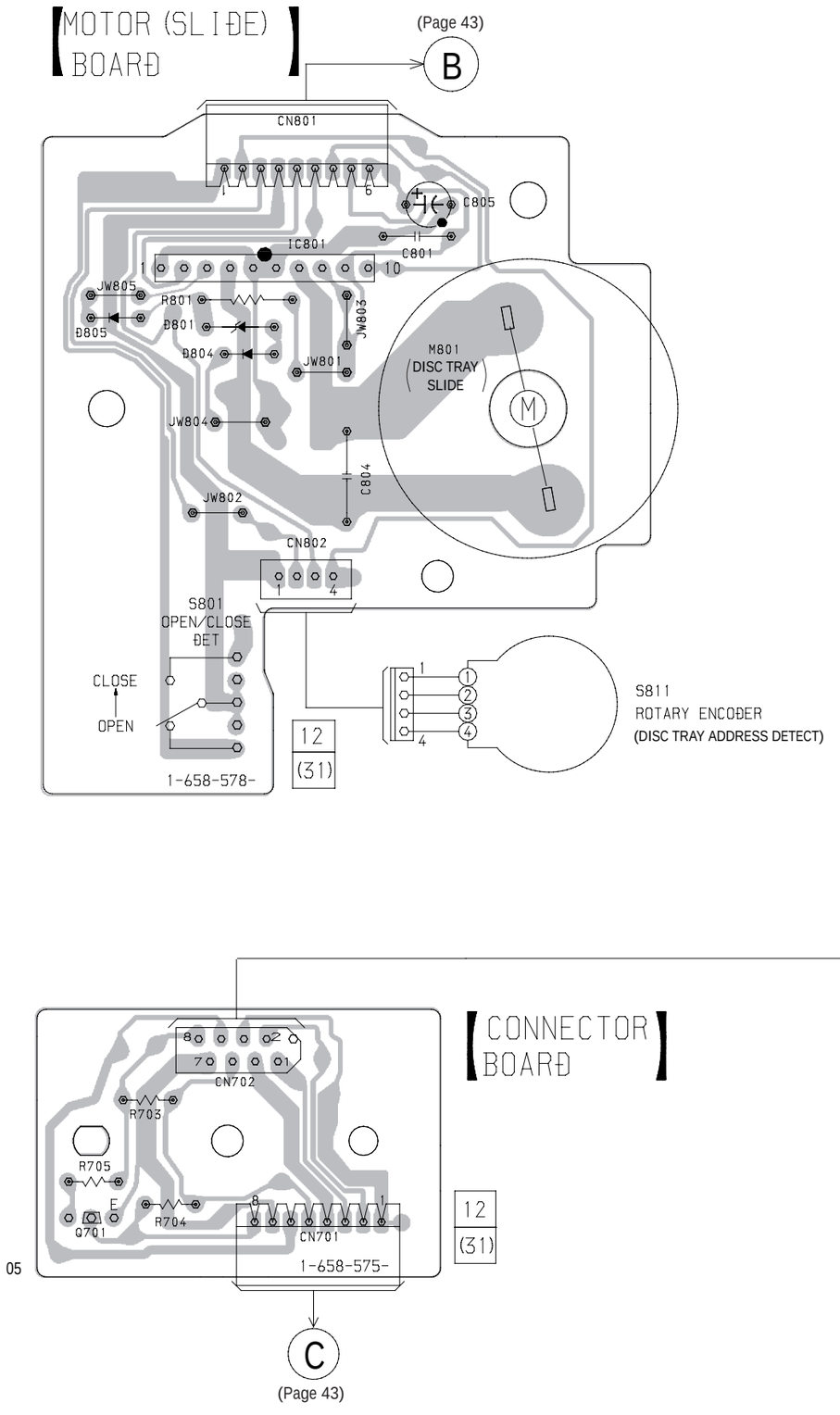


• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD STOP
( ) : CD PLAY

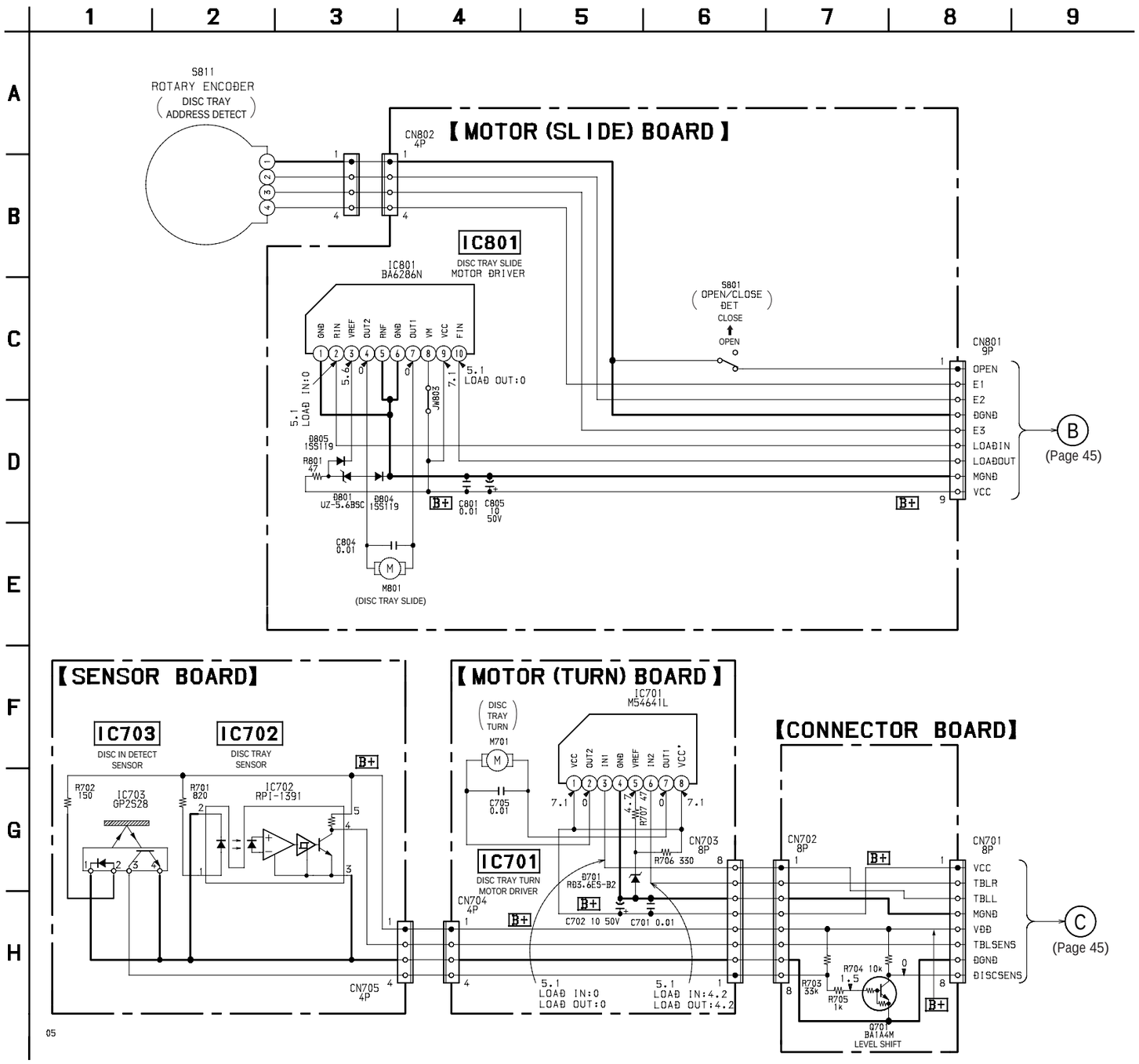
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-8. PRINTED WIRING BOARDS – CD MOTOR Section –

• See page 28 for IC Circuit Boards Location.

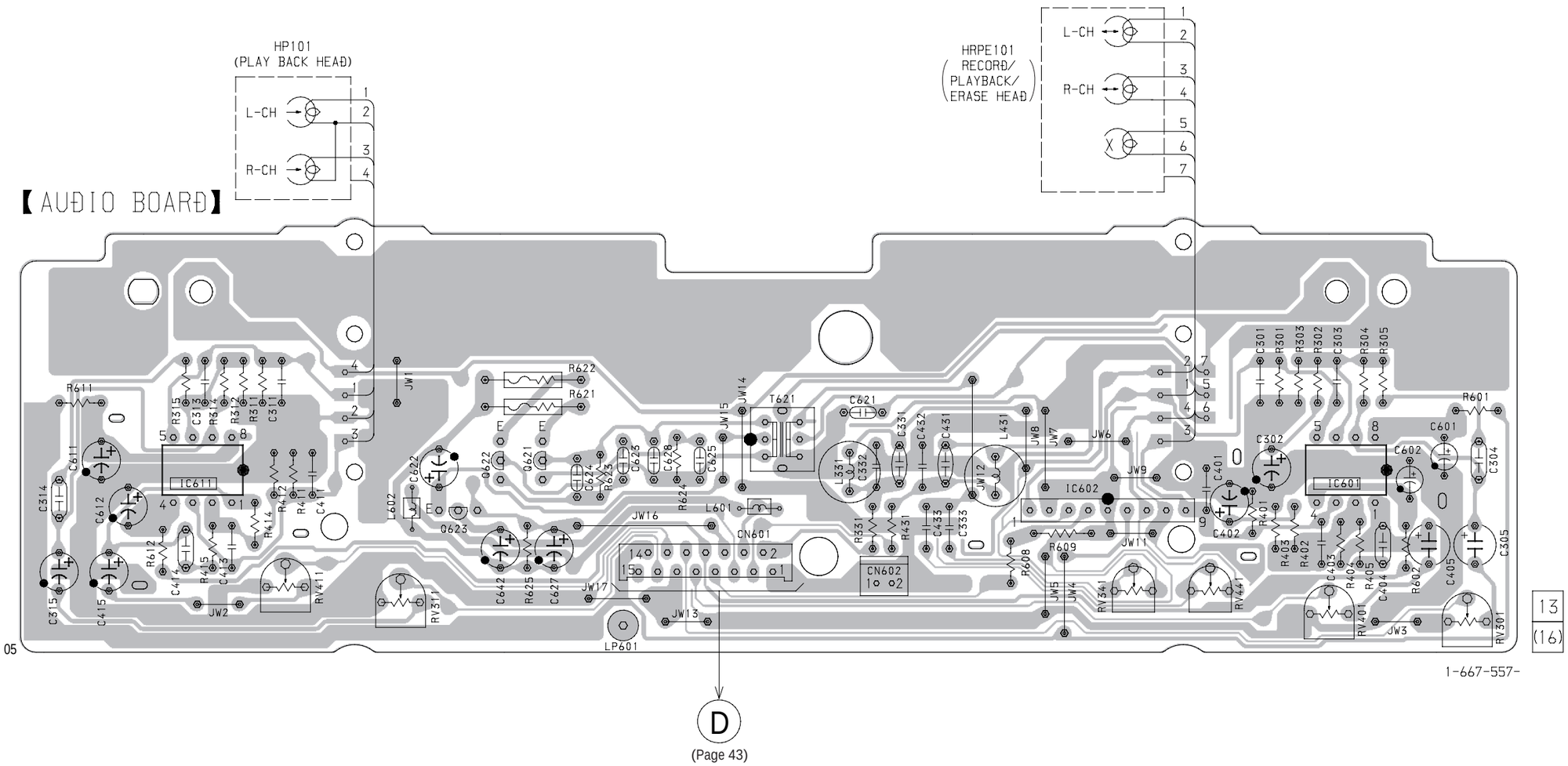


7-9. SCHEMATIC DIAGRAM – CD MOTOR Section – • See page 65 for IC Block Diagrams.

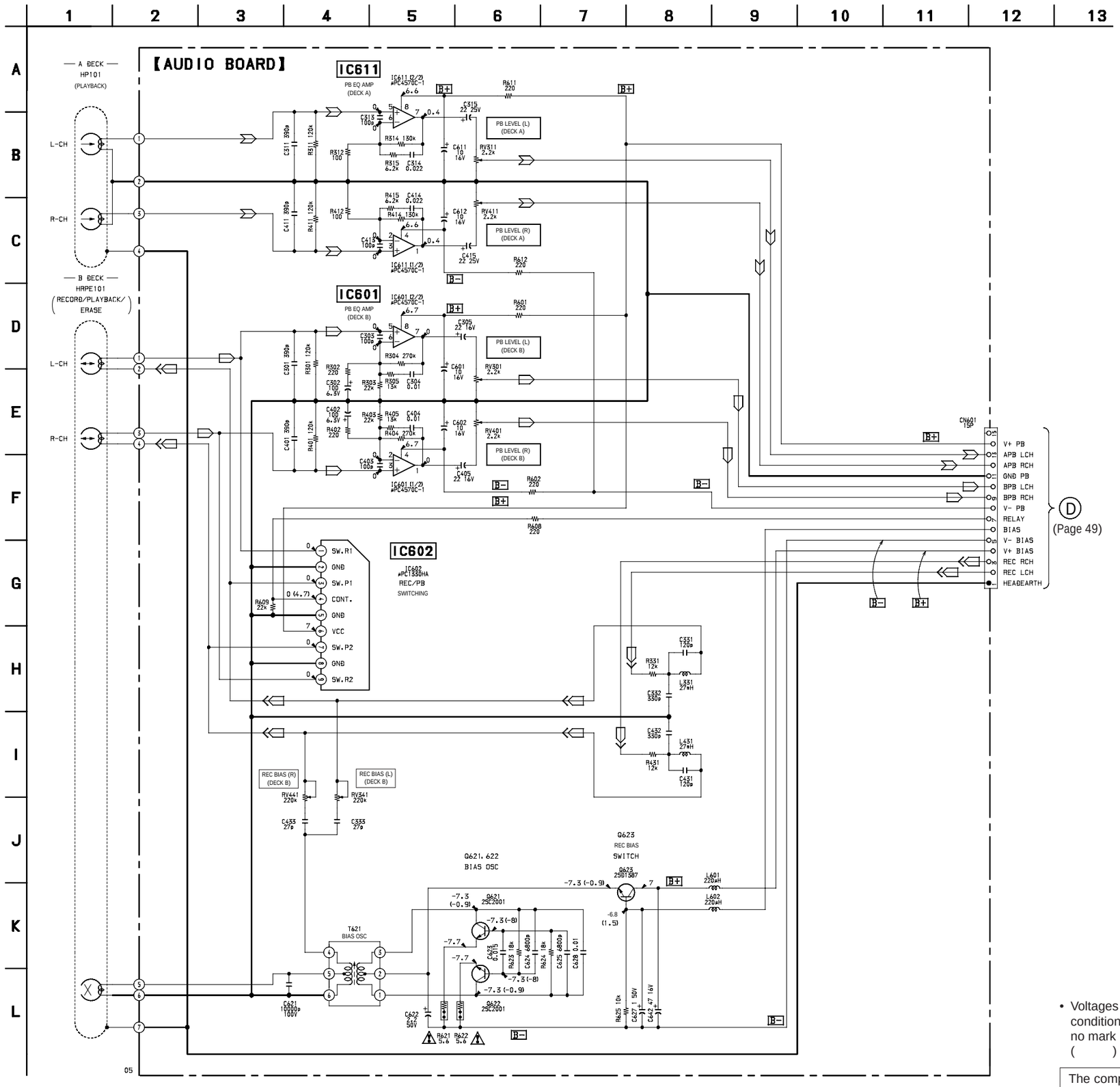


• Voltages are dc with respect to ground under no-signal conditions.
no mark : CD STOP

7-10. PRINTED WIRING BOARD – AUDIO Board – • See page 28 for Circuit Boards Location.



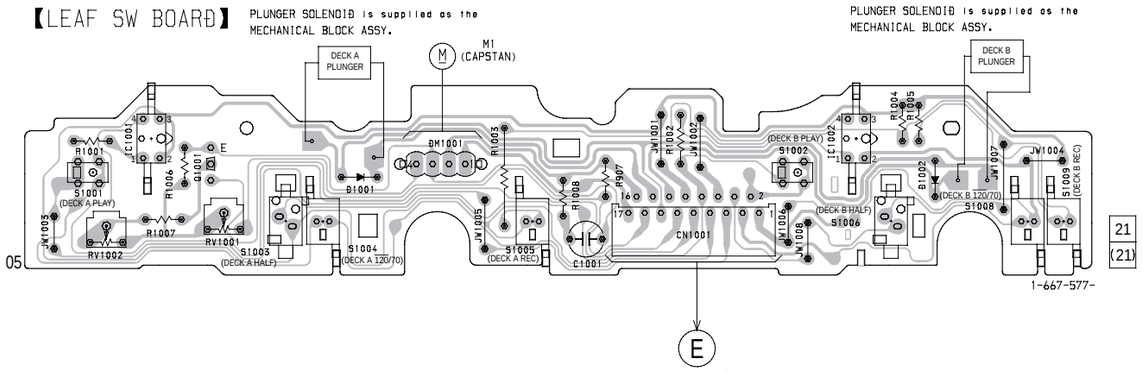
7-11. SCHEMATIC DIAGRAM – AUDIO Board – • See page 66 for IC Block Diagram.



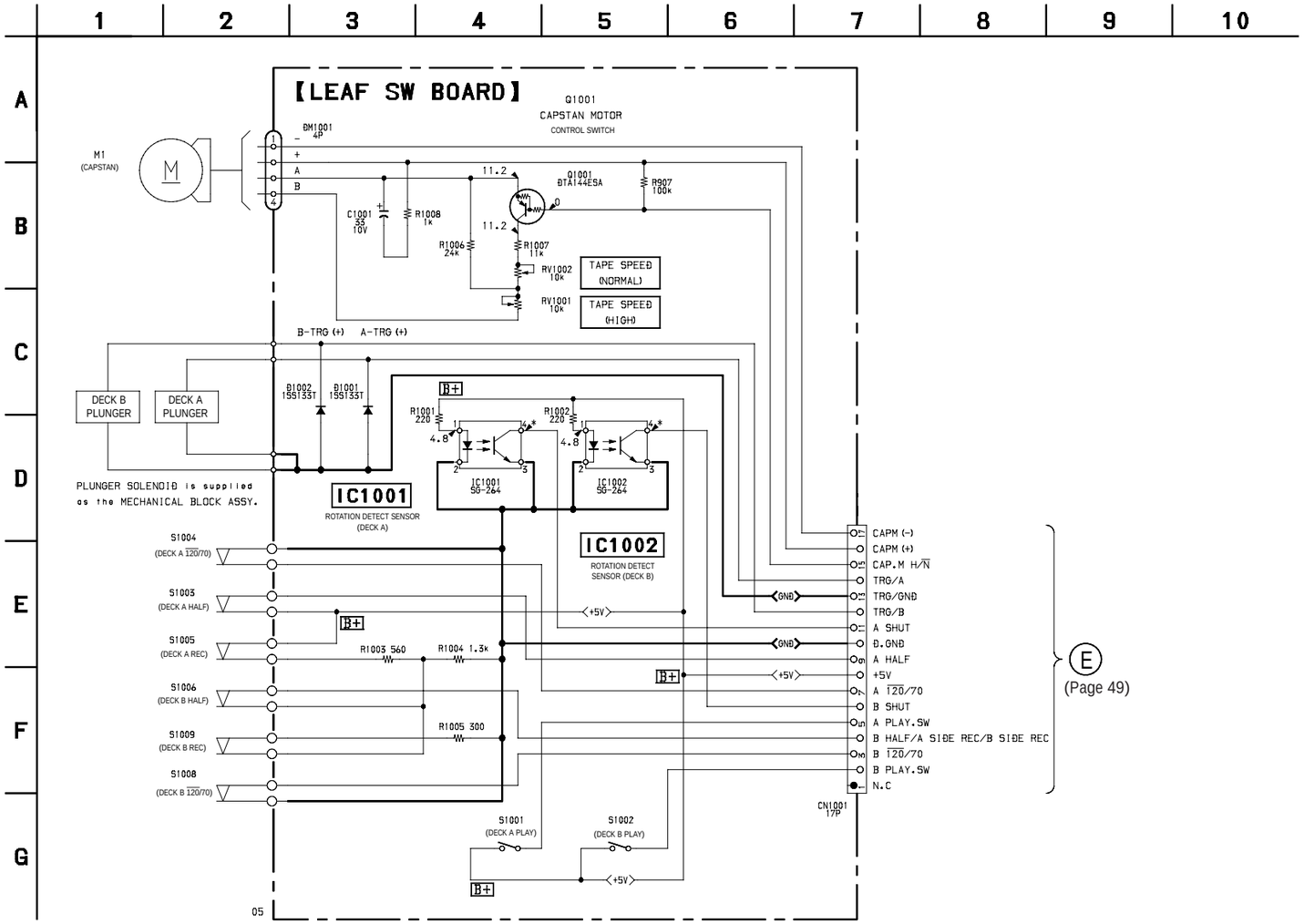
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : TAPE PLAY
  ( ) : RECORD

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-12. PRINTED WIRING BOARD – LEAF SW Board – • See page 28 for Circuit Boards Location.



7-13. SCHEMATIC DIAGRAM – LEAF SW Board –

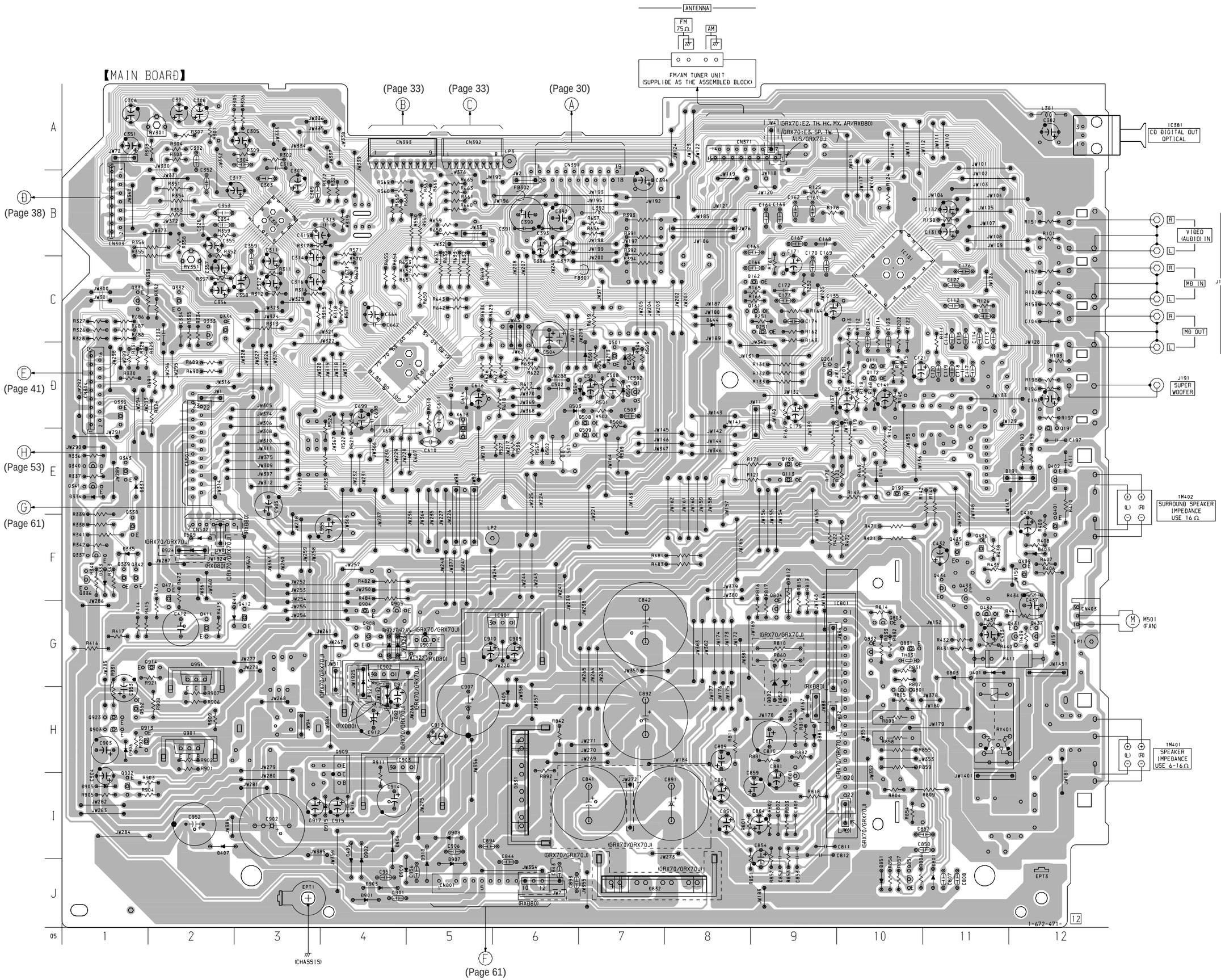


• Voltages are dc with respect to ground under no-signal conditions.
no mark : TAPE PLAY
( ) : RECORD
∗ : Impossible to measure

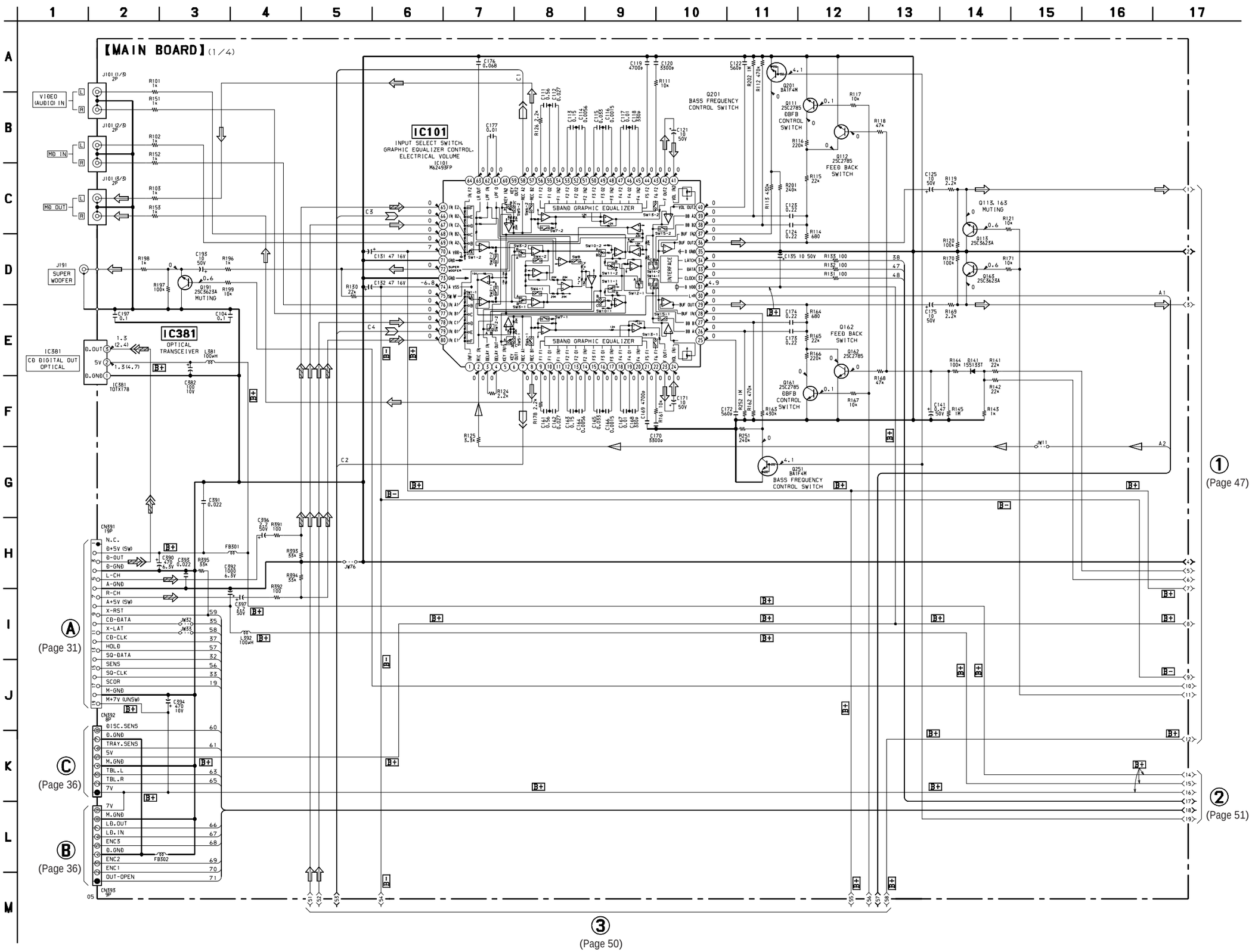
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D141	E-10	Q113	E-9
D191	E-12	Q161	C-9
D331	E-1	Q162	C-9
D333	F-1	Q163	E-9
D334	E-1	Q191	E-12
D335	F-1	Q192	E-10
D401	G-11	Q201	D-9
D403	F-12	Q251	C-9
D405	H-6	Q331	C-1
D406	J-4	Q332	C-2
D407	I-2	Q333	C-2
D411	G-3	Q334	C-2
D501	D-7	Q335	D-1
D502	E-6	Q336	F-1
D503	D-6	Q337	F-1
D504	D-7	Q338	F-1
D505	D-7	Q339	F-1
D506	D-7	Q340	E-1
D509	F-2	Q341	E-1
D607	E-5	Q342	F-1
D644	C-8	Q343	E-1
D801	J-11	Q401	F-12
D802	G-9	Q402	E-12
D803	G-11	Q411	G-2
D831	I-6	Q412	G-3
D832	J-7	Q431	G-12
D851	J-10	Q432	G-11
D852	G-9	Q433	F-11
D881	H-9	Q434	F-11
D901	J-4	Q435	F-11
D902	J-4	Q436	F-11
D903	J-4	Q437	G-12
D904	I-4	Q439	F-12
D905	I-1	Q471	F-2
D906	H-1	Q501	D-7
D907	J-5	Q508	D-7
D908	I-5	Q509	E-7
D909	J-5	Q801	H-10
D910	J-5	Q803	G-10
D915	I-4	Q804	G-9
D921	H-4	Q831	G-10
D922	G-4	Q832	G-10
D923	G-4	Q851	J-10
D924	F-2	Q881	I-9
D925	G-4	Q901	H-2
		Q902	I-1
IC101	C-10	Q903	H-1
IC301	B-3	Q904	G-4
IC381	A-12	Q905	G-4
IC501	D-5	Q907	G-5
IC502	D-7	Q908	G-4
IC801	H-10	Q909	I-4
IC901	G-6	Q913	H-1
IC902	G-4	Q914	G-2
IC903	H-4	Q923	H-1
		Q951	G-2
Q111	D-10	Q952	H-1
Q112	D-10		

7-14. PRINTED WIRING BOARD – MAIN Board – • See page 28 for Circuit Boards Location.

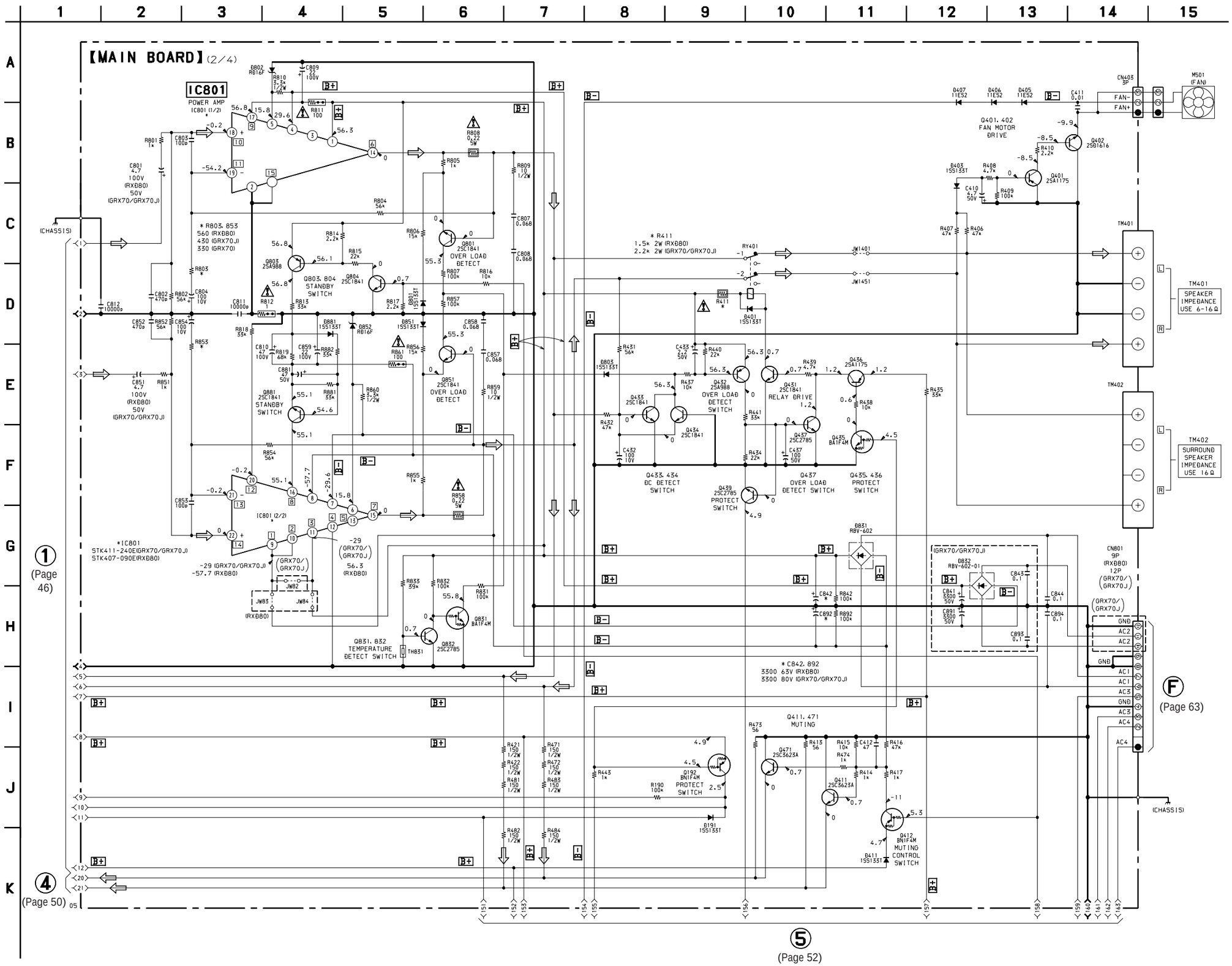


7-15. SCHEMATIC DIAGRAM – MAIN Board (1/4) –



• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : TUNER (FM/AM)
( ) : CD PLAY

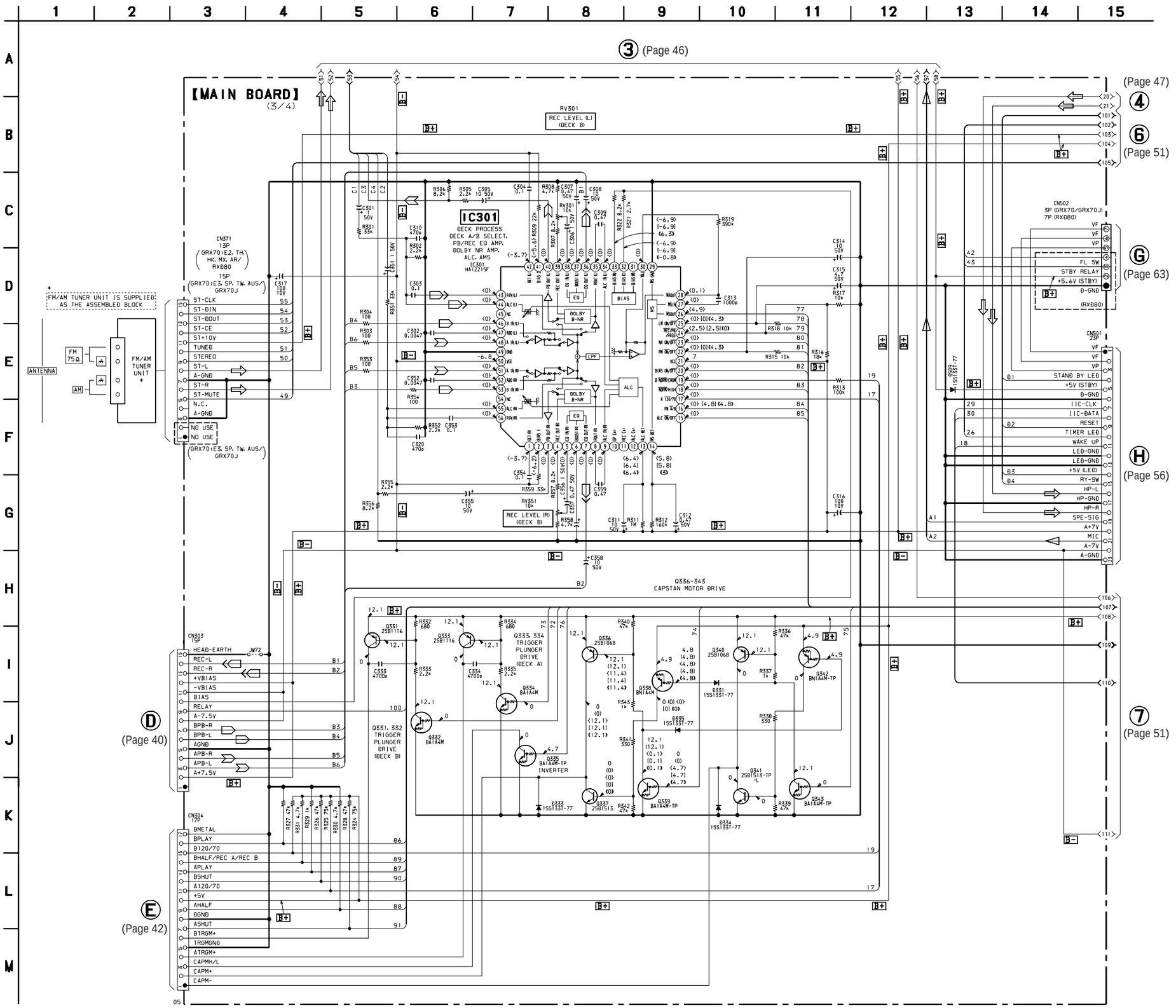
7-16. SCHEMATIC DIAGRAM – MAIN Board (2/4) –



• Voltages are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM

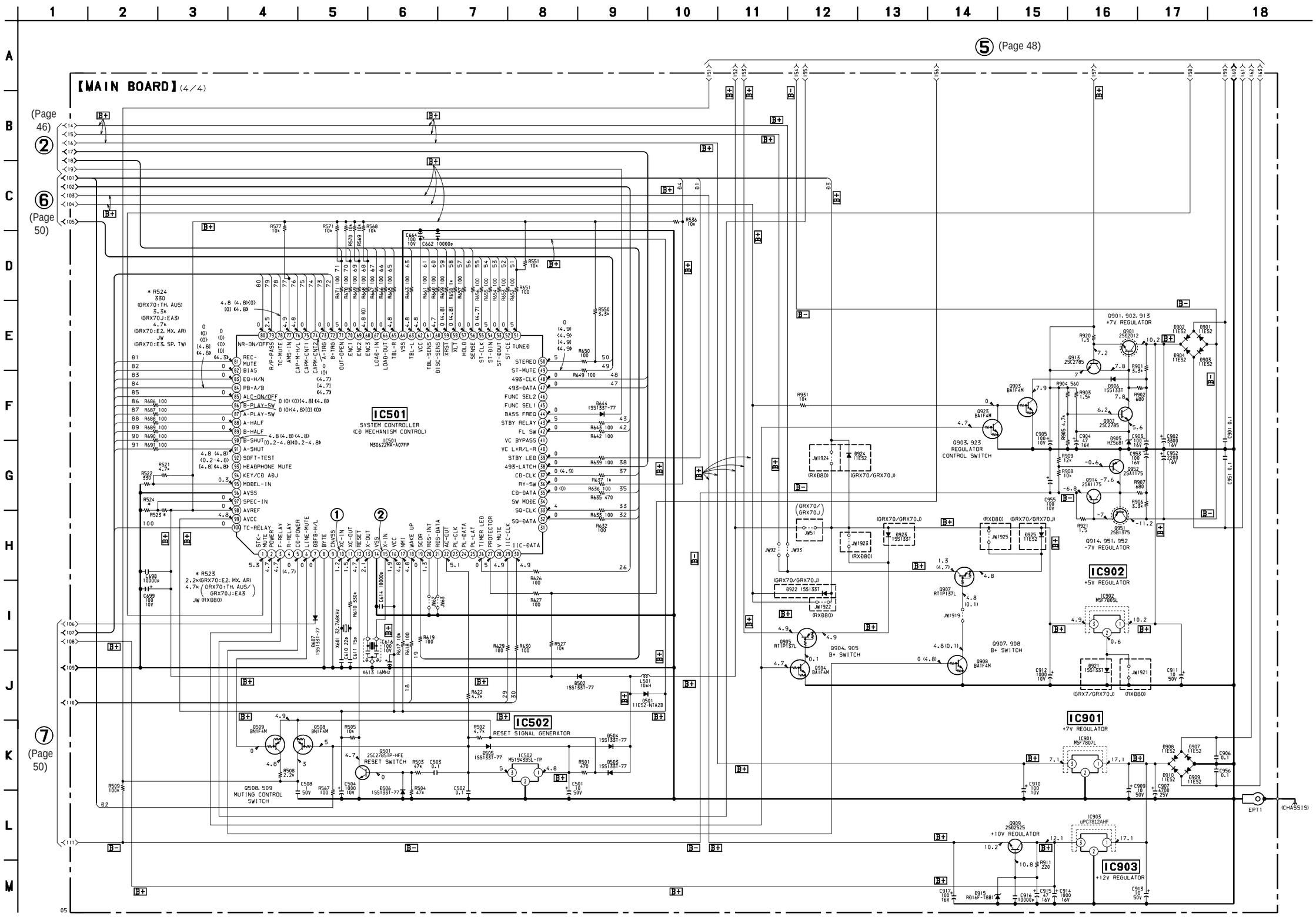
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-17. SCHEMATIC DIAGRAM – MAIN Board (3/4) –



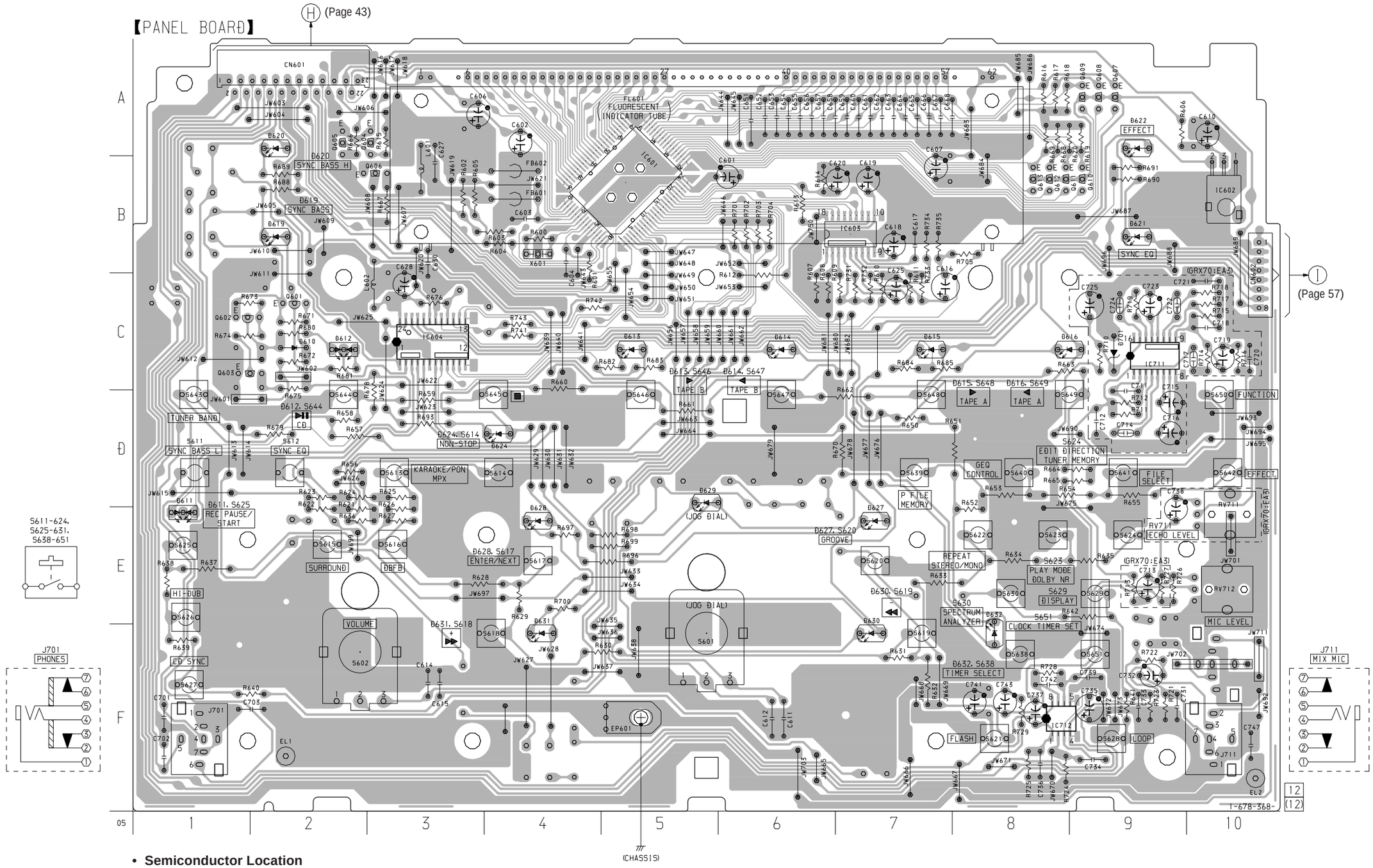
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  { } : TAPE PLAYBACK (DECK A)
  [ ] : TAPE PLAYBACK (DECK B)
  〈〈 〉〉 : RECORD

7-18. SCHEMATIC DIAGRAM – MAIN Board (4/4) – • See page 59 for Waveforms.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  { } : TAPE PLAYBACK (DECK A)
  [ ] : TAPE PLAYBACK (DECK B)
  ⟨⟨ ⟩⟩ : RECOARD

7-19. PRINTED WIRING BOARD – PANEL Board – • See page 28 for Circuit Boards Location.

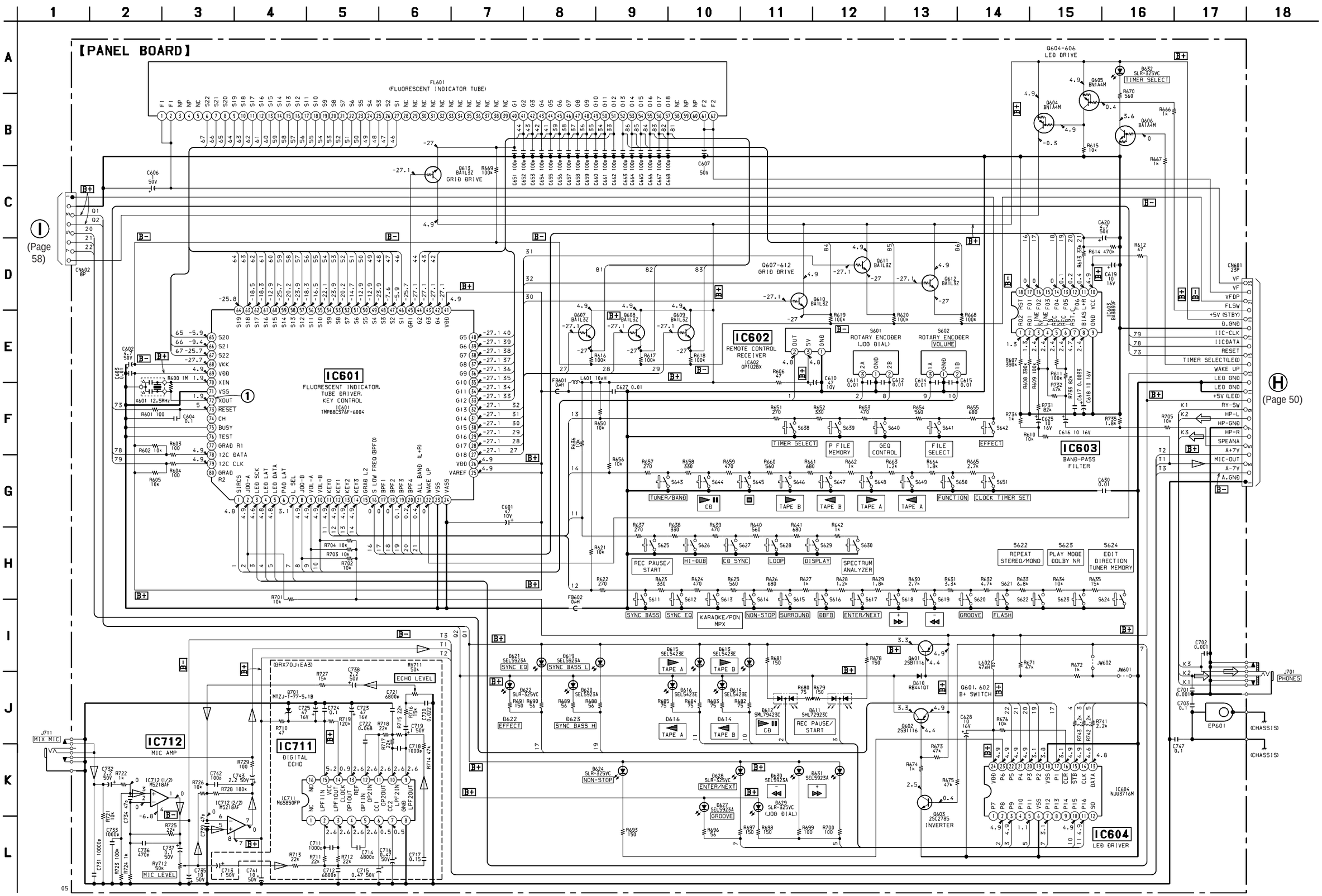


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D610	C-2	D628	E-4	Q601	C-2
D611	E-1	D629	D-5	Q602	C-1
D612	C-2	D630	F-7	Q603	C-1
D613	C-5	D631	F-4	Q604	A-3
D614	C-6	D632	F-8	Q605	A-2
D615	C-7	D701	C-9	Q606	B-3
D616	C-8			Q607	A-9
D619	B-2	IC601	B-5	Q608	A-9
D620	A-2	IC602	B-10	Q609	A-9
D621	B-9	IC603	B-7	Q610	B-9
D622	A-9	IC604	C-3	Q611	B-8
D624	D-4	IC711	C-9	Q612	B-8
D627	E-7	IC712	F-8	Q613	B-8

7-20. SCHEMATIC DIAGRAM – PANEL Board–

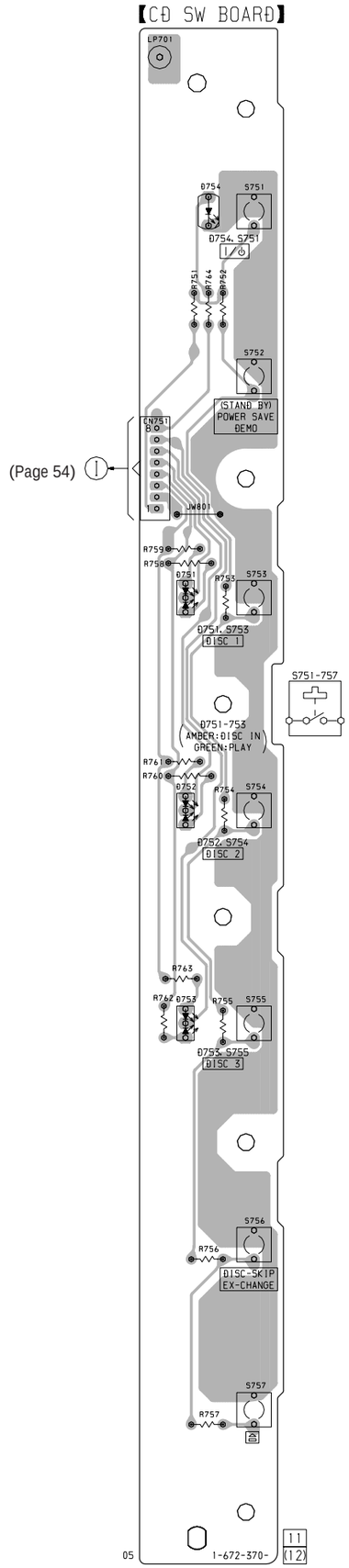
• See page 59 for Waveform. • See page 66 for IC Block Diagrams.



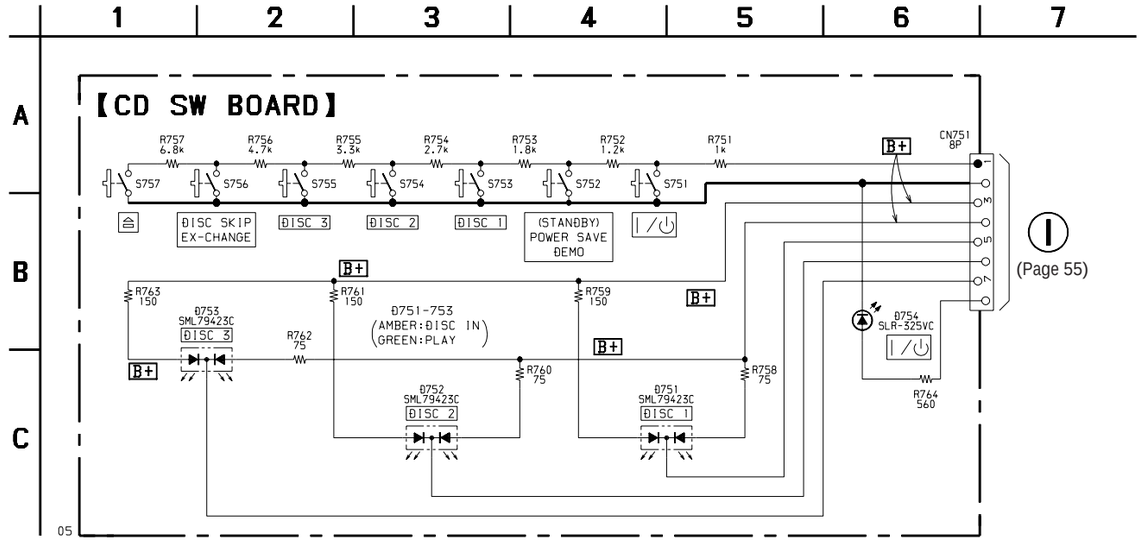
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)

7-21. PRINTED WIRING BOARD – CD SW Board –

• See page 28 for Circuit Boards Location.



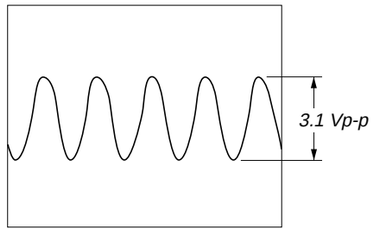
7-22. SCHEMATIC DIAGRAM – CD SW Board –



• **Waveforms**

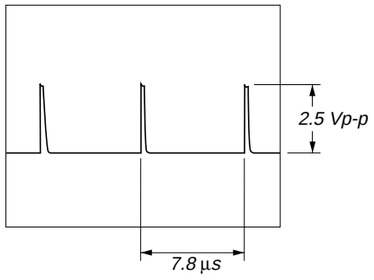
– BD Board –

❶ IC101 ⑥⑦ (XTAO)

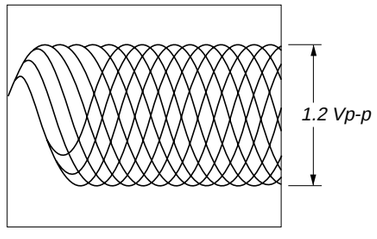


16.9344 MHz

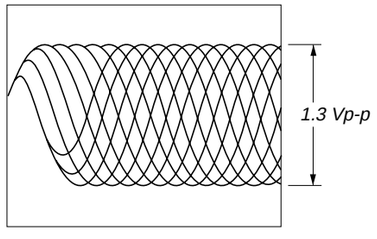
❺ IC101 ㉖ (MDP)



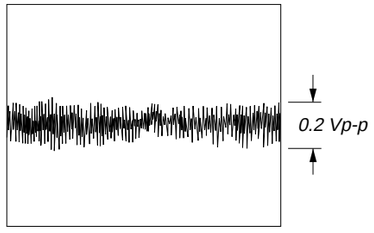
❷ IC101 ⑤① (RF AC) (CD Play Mode)



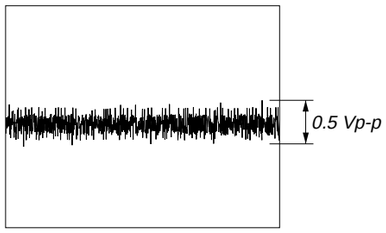
❻ IC102 ⑯ (RFO) (CD Play Mode)



❸ IC101 ④① (TE) (CD Play Mode)

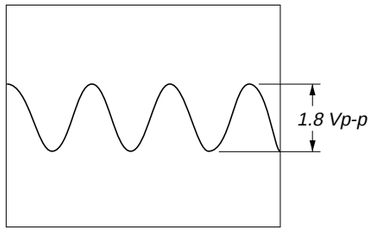


❹ IC101 ㊴ (FE) (CD Play Mode)



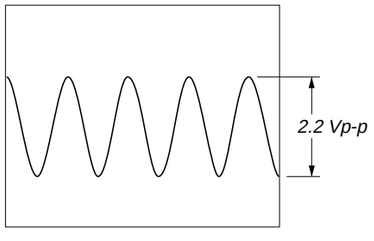
– MAIN Board –

❶ IC501 ⑩ (XC-IN)



32.768 kHz

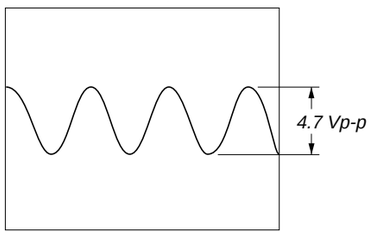
❷ IC501 ⑮ (XIN)



16 MHz

– PANEL Board –

❶ IC601 ⑦② (XOUT)

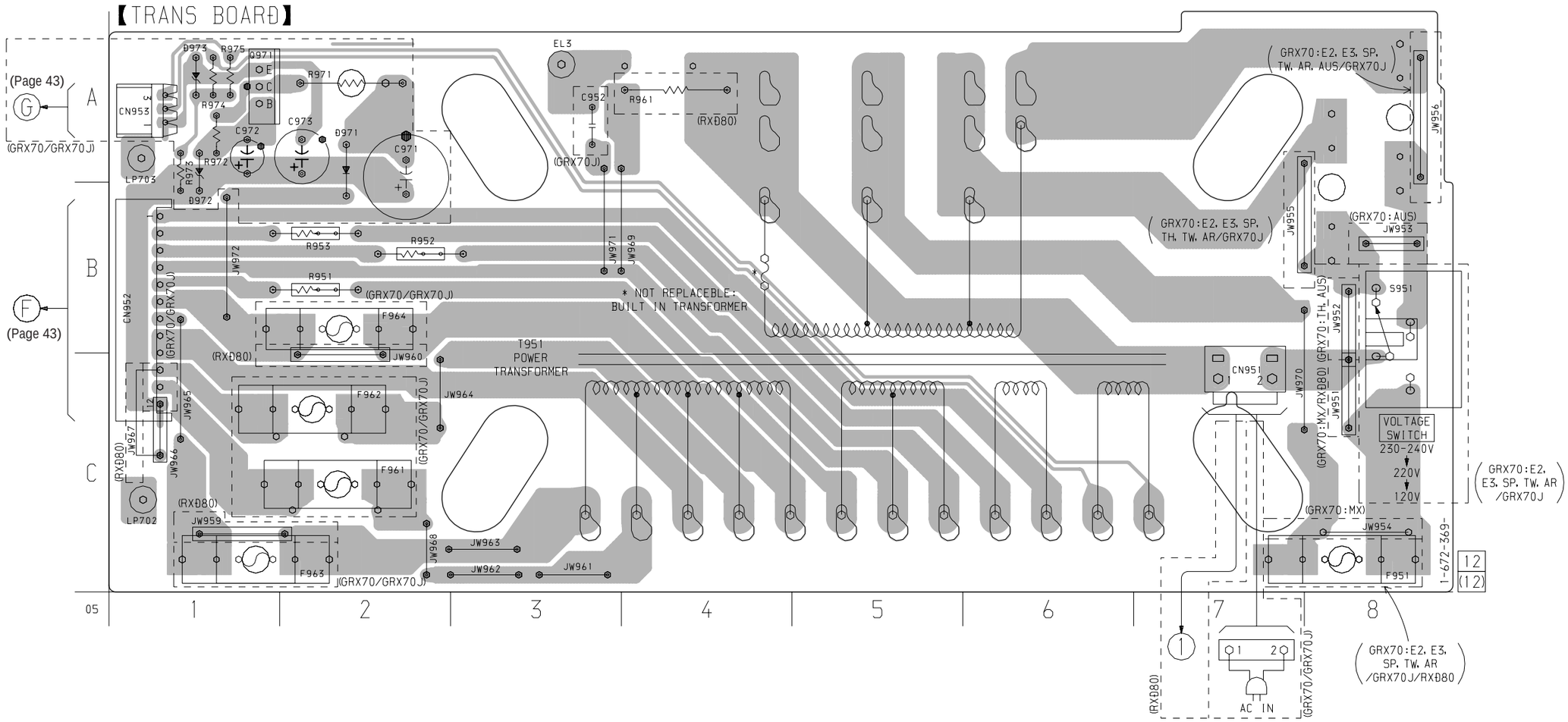


12.5 MHz

7-23. PRINTED WIRING BOARDS – TRANSFORMER Section – • See page 28 for Circuit Boards Location.

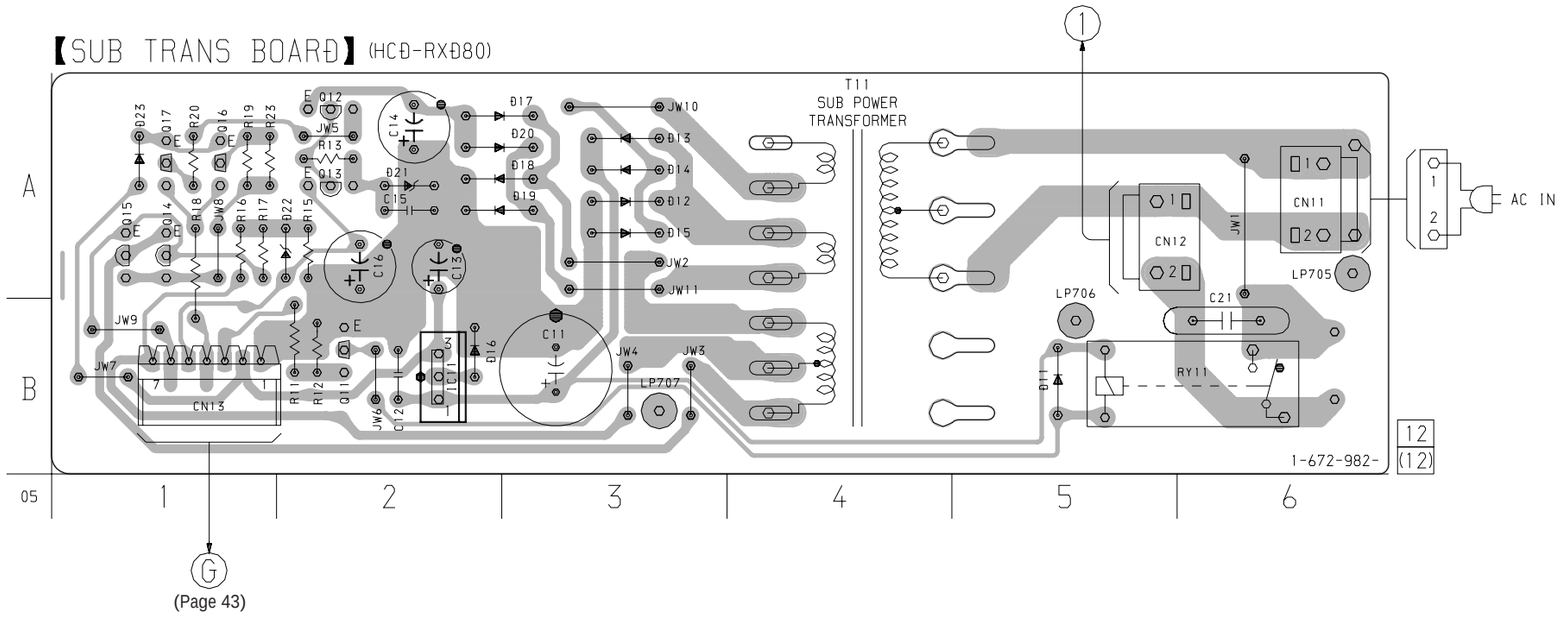
- **Semiconductor Location**

Ref. No.	Location
D971	A-2
D972	A-1
D973	A-1
Q971	A-1

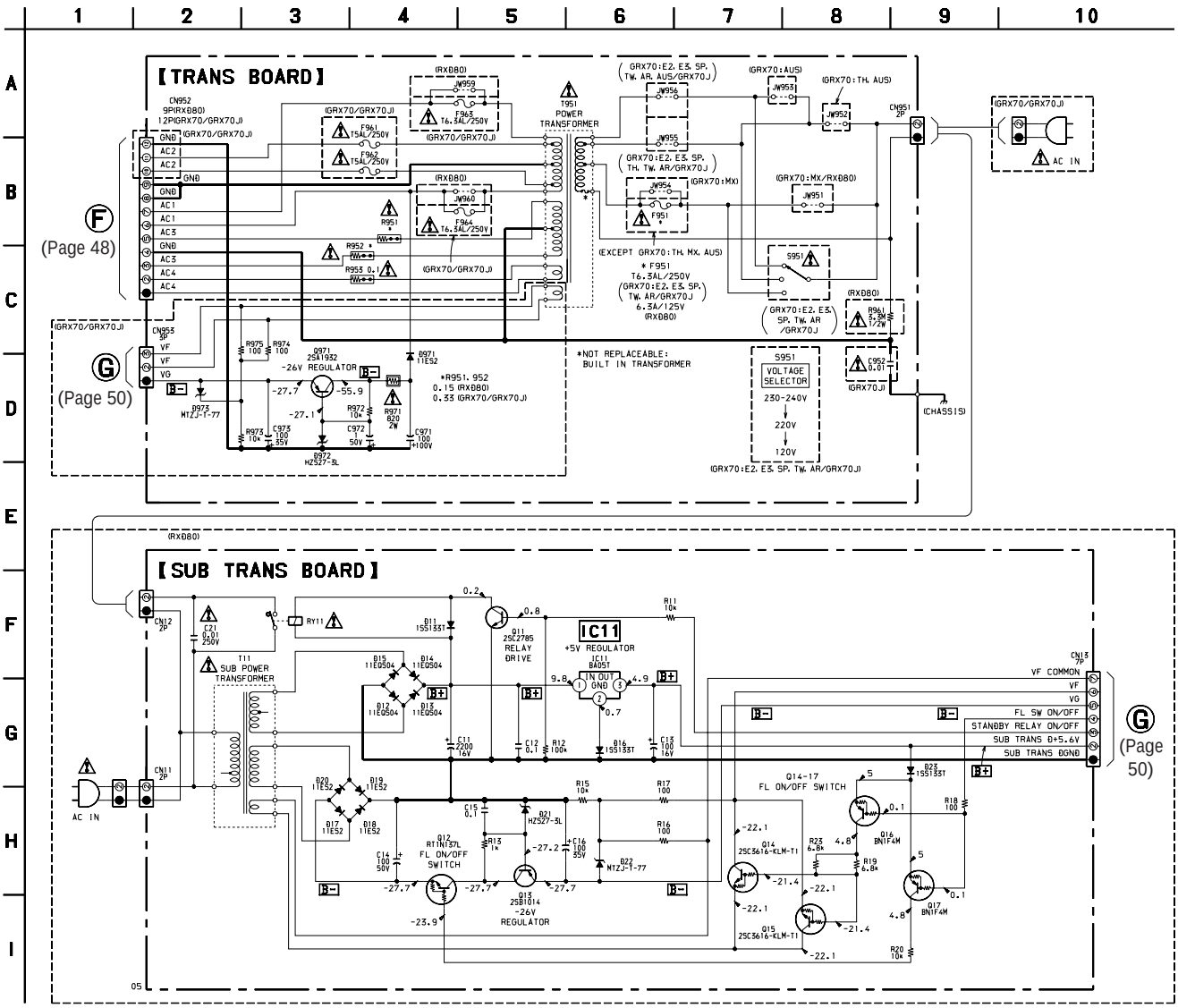


- **Semiconductor Location**

Ref. No.	Location
D11	B-5
D12	A-3
D13	A-3
D14	A-3
D15	A-3
D16	B-2
D17	A-2
D18	A-2
D19	A-2
D20	A-2
D21	A-2
D22	A-2
D23	A-1
IC11	B-2
Q11	B-2
Q12	A-2
Q13	A-2
Q14	A-1
Q15	A-1
Q16	A-1
Q17	A-1



7-24. SCHEMATIC DIAGRAM – TRANSFORMER Section –



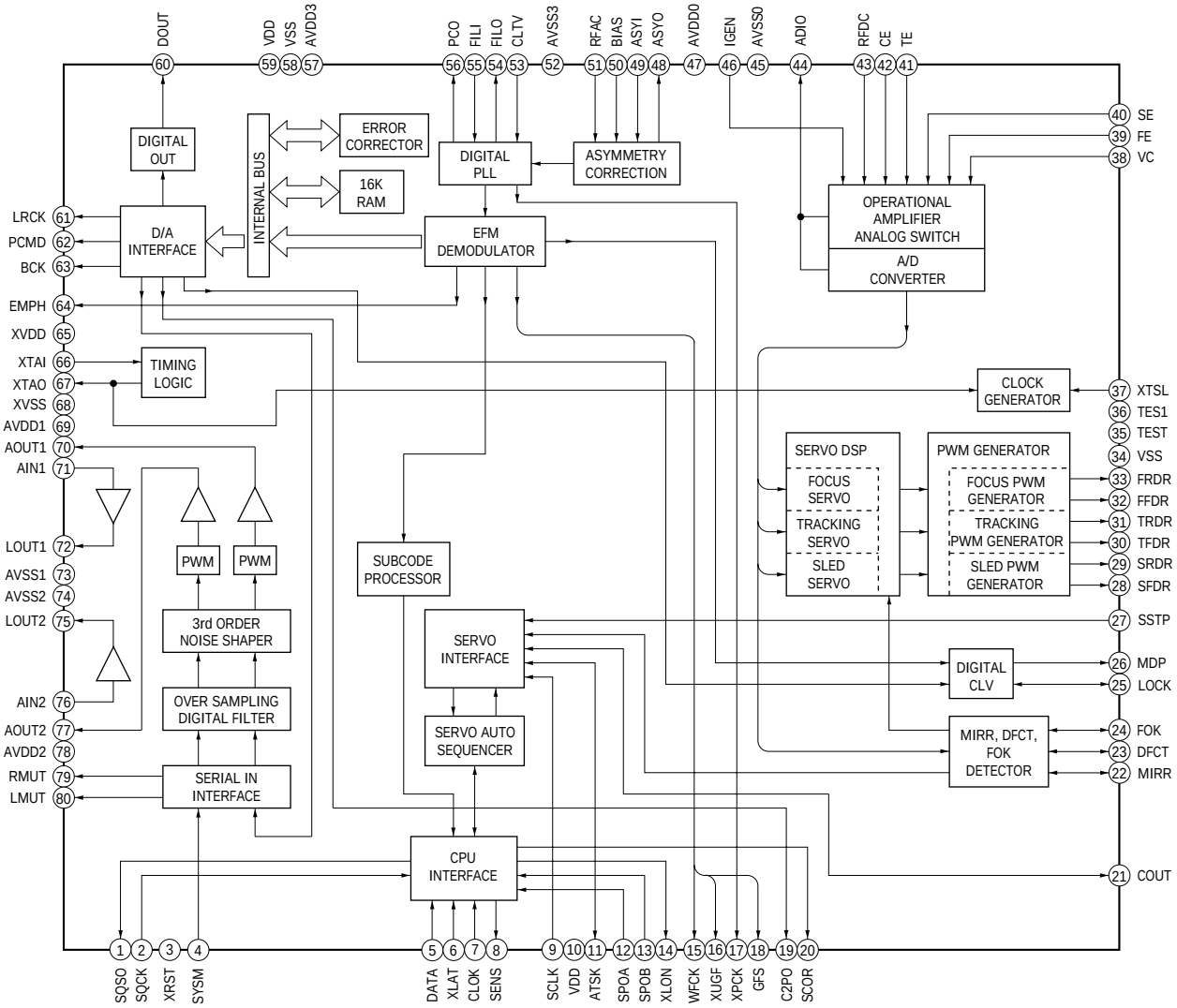
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : TUNER (FM/AM)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

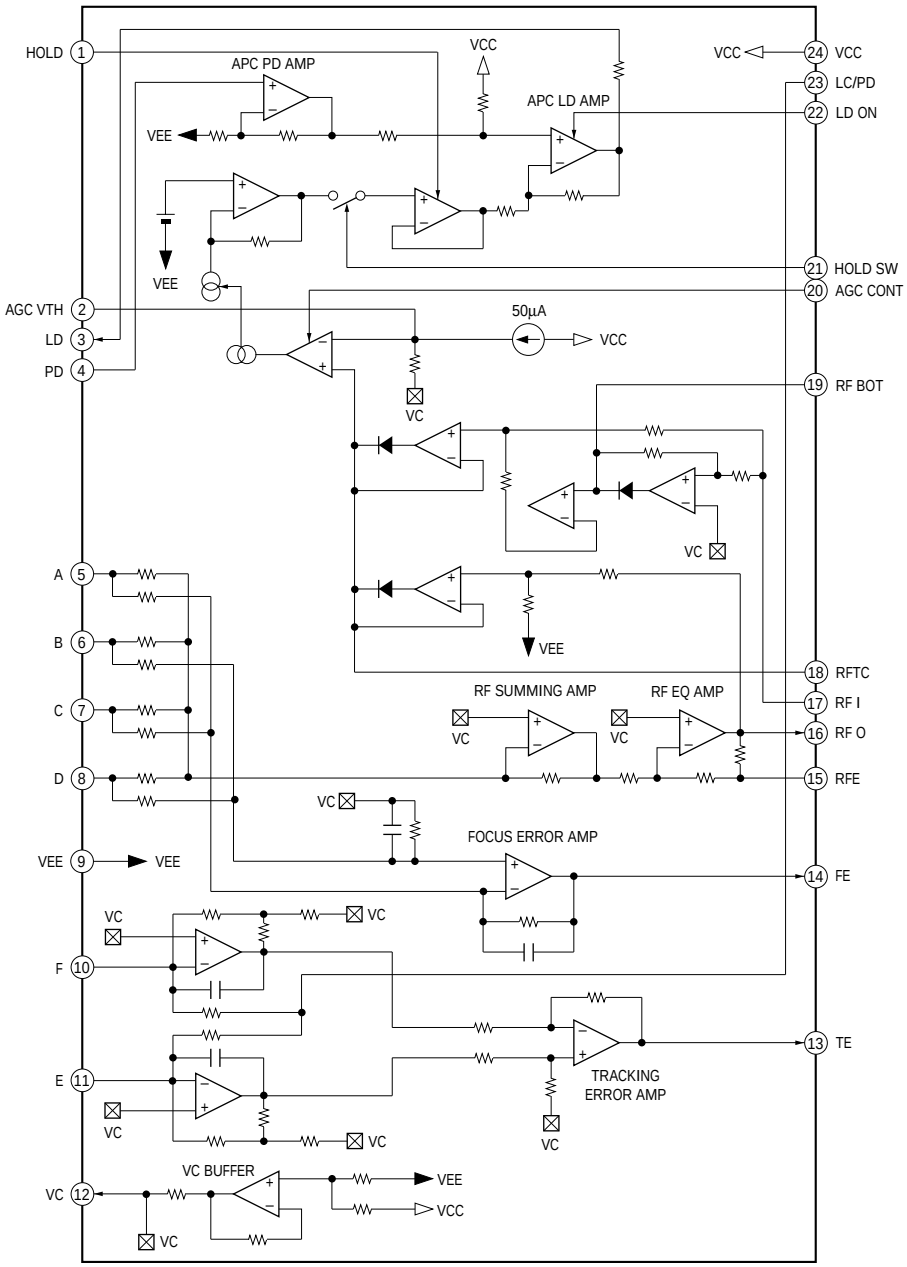
• **IC Block Diagrams**

– BD Board –

IC101 CXD2587Q

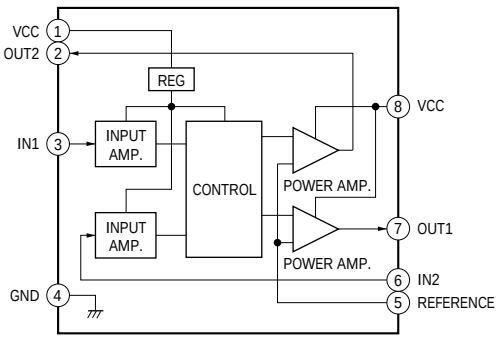


IC103 CXA2568M-T6



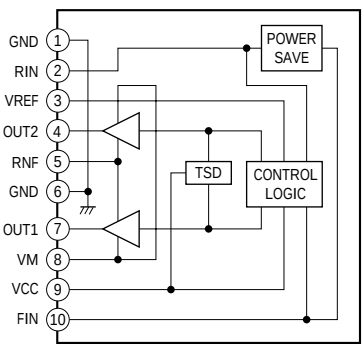
– MOTOR (TURN) Board –

IC701 M54641L



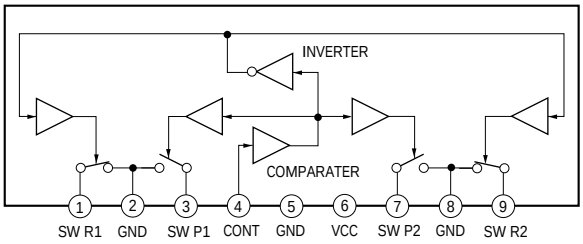
– MOTOR (SLIDE) Board –

IC801 BA6286N



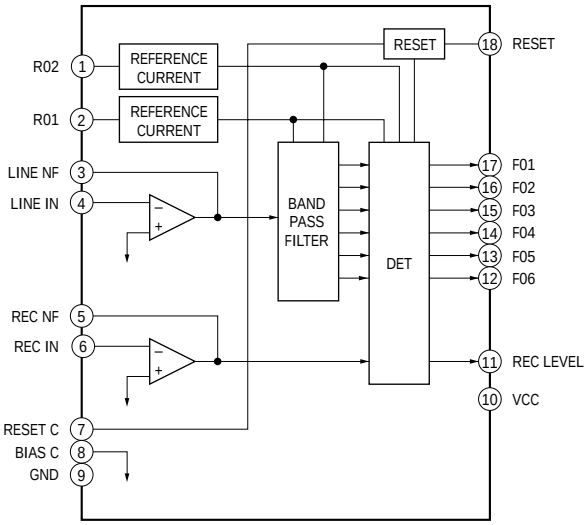
– AUDIO Board –

IC602 µPC1330HA

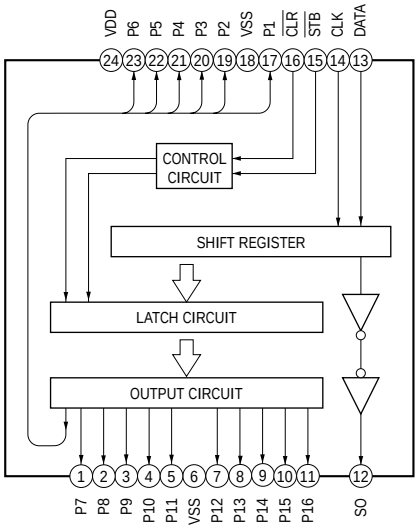


– PANEL Board –

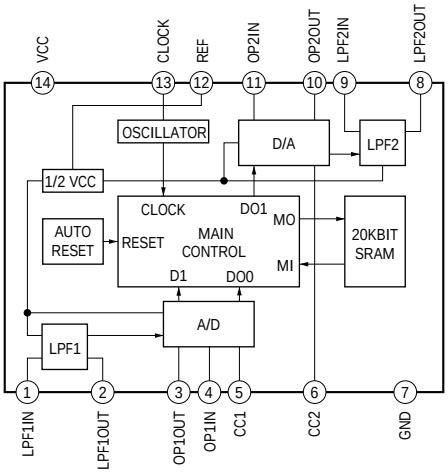
IC603 BA3830F



IC604 NJU3716M-T2



IC711 M65850FP (HCD-GRX70J: Saudi Arabia)



7-25. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 M30622MA-A07FP (SYSTEM CONTROLLER (CD MECHANISM CONTROL))

Pin No.	Pin Name	I/O	Description
1	STK-MUTE	O	Power amplifier on/off selection signal output terminal "L": standby mode, "H": on
2	POWER	O	Power on/off control signal output for the audio system (+5V) and deck, panel, audio system (+7V) "L": standby mode, "H": power on
3	F-RELAY	O	Relay drive signal output for the speaker protect "H": relay on
4	R-RELAY	O	Relay drive signal output for the speaker protect "H": relay on Not used (open)
5	CD-POWER	O	Power on/off control signal output for the CD mechanism deck section "L": standby mode, "H": power on
6	LINE-MUTE	O	Line muting on/off control signal output terminal "L": muting on
7	DBFB-H/L	O	DBFB normal/high selection signal output to the M62493FP (IC101) "L": DBFB high, "H": DBFB low
8	BYTE	I	External data bus line byte selection signal input terminal Fixed at "L" in this set
9	CNVSS	—	Ground terminal
10	XC-IN	I	Sub system clock input terminal (32.768 kHz)
11	XC-OUT	O	Sub system clock output terminal (32.768 kHz)
12	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC502) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	X-OUT	O	Main system clock output terminal (16 MHz)
14	VSS	—	Ground terminal
15	X-IN	I	Main system clock input terminal (16 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal Fixed at "H" in this set
18	WAKE UP	I	Wakeup control signal input from the fluorescent indicator tube driver (IC601) "H" active
19	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2587Q (IC101) on the CD block
20	RDS-INT	I	Serial data transfer clock signal input terminal Not used (fixed at "L")
21	RDS-DATA	I	Serial data input terminal Not used (fixed at "L")
22	$\overline{\text{AC-CUT}}$	I	AC off detection signal input from the reset signal generator (IC502) "L": AC cut checked
23	PL-CLK	O	Serial data transfer clock signal output to the pro-logic circuit Not used (open)
24	PL-DATA	O	Serial data output to the pro-logic circuit Not used (open)
25	PL-LAT	O	Serial data latch pulse output to the pro-logic circuit Not used (open)
26	TIMER LED	O	LED drive signal output of the TIMER SELECT indicator (D632) "H": LED on
27	PROTECTOR	I	Protect on/off detection signal input from the speaker protect circuit "L": protect on, "H": protect off
28	V MUTE	O	Muting on/off control signal output terminal "L": muting off Not used (open)
29	IIC-CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the fluorescent indicator tube driver (IC601)
30	IIC-DATA	I/O	Communication data bus with the fluorescent indicator tube driver (IC601)
31	NCO	O	Not used (open)
32	SQ-DATA	I	Subcode Q data input from the CXD2587Q (IC101) on the CD block
33	SQ-CLK	O	Subcode Q data reading clock signal output to the CXD2587Q (IC101) on the CD block
34	SW MODE	O	Not used (open)
35	CD-DATA	O	Serial data output to the CXD2587Q (IC101) on the CD block
36	RY-SW	I	Connection detect signal input of the headphone jack (J701) "L": no connected, "H": headphone connected
37	CD-CLK	O	Serial data transfer clock signal output to the CXD2587Q (IC101) on the CD block
38	493-LATCH	O	Serial data latch pulse output to the M62493FP (IC101)
39	STBY LED	O	LED drive signal output of the I/⏻ indicator (D754) "H": LED on (standby mode)

Pin No.	Pin Name	I/O	Description
40	VC L+R/L–R	O	Virtual cinema L+R/L–R selection signal output terminal Not used (open)
41	VC BYPASS	O	Virtual cinema bypass control signal output terminal Not used (open)
42	FL SW	O	Filament on/off selection signal output for the fluorescent indicator tube (FL601) "L": on, "H": off Used for the HCD-RXD80 model only
43	STBY RELAY	O	Main power on/off control signal output terminal "L": standby mode, "H": power on Used for the HCD-RXD80 model only
44	BASS FREQ.	O	Sync bass frequency normal/high selection signal output to the M62493FP (IC101) "L": sync bass off (normal), "H": sync bass high
45	FUNC SEL1	O	Not used (open)
46	FUNC SEL0	O	Not used (open)
47	493-DATA	O	Serial data output to the M62493FP (IC101)
48	493-CLK	O	Serial data transfer clock signal output to the M62493FP (IC101)
49	ST-MUTE	O	Tuner muting control signal output to the FM/AM tuner unit "H": muting on
50	STEREO	I	FM stereo detection signal input from the FM/AM tuner unit "L": stereo
51	TUNED	I	Tuning detection signal input from the FM/AM tuner unit "L": tuned
52	ST-CE	O	PLL chip enable signal output to the FM/AM tuner unit
53	ST-DOUT	O	PLL serial data output to the FM/AM tuner unit
54	ST-DIN	I	PLL serial data input from the FM/AM tuner unit
55	ST-CLK	O	PLL serial data transfer clock signal output to the FM/AM tuner unit
56	SENSE	I	Internal status detection monitor input from the CXD2587Q (IC101) on the CD block
57	HOLD	O	Laser power control signal output to the CXA2568M (IC103) on the CD block
58	$\overline{\text{XLT}}$	O	Serial data latch pulse output to the CXD2587Q (IC101) on the CD block
59	$\overline{\text{XRST}}$	O	Reset signal output to the CXD2587Q (IC101) and BA5974FP (IC102) on the CD block "L": reset
60	DISC-SENS	I	Disc status detection signal input from the disc sensor (IC703)
61	TBL-SENS	I	Disc tray status detection signal input from the disc tray sensor (IC702)
62	VCC	—	Power supply terminal (+5V)
63	TBL-L	O	Motor drive signal output to the disc tray turn motor driver (IC701) "L" active *1
64	VSS	—	Ground terminal
65	TBL-R	O	Motor drive signal output to the disc tray turn motor driver (IC701) "L" active *1
66	LOAD-OUT	O	Motor drive signal output to the disc tray slide motor driver (IC801) "H" active *2
67	LOAD-IN	O	Motor drive signal output to the disc tray slide motor driver (IC801) "H" active *2
68 to 70	ENC3 to ENC1	I	Detection signal input from the disc tray address detect rotary encoder (S811)
71	OUT-OPEN	I	Detection signal input from the disc tray open/close detect switch (S801) "L": open, "H": close
72	B-TRG	O	Deck-B side trigger plunger drive signal output terminal "H": plunger on
73	A-TRG	O	Deck-A side trigger plunger drive signal output terminal "H": plunger on
74	CAPM-CNT2	O	Capstan motor (M1) drive signal output terminal "H" active *3
75	CAPM-CNT1	O	Capstan motor (M1) drive signal output terminal "H" active *3
76	CAP-M-H/L	O	High/normal speed selection signal output of the capstan motor (M1) "L": normal speed, "H": high speed

*1 Disc tray turn motor (M701) control

Mode / Terminal	Stop	Counter-clockwise	Clockwise	Brake
TBL-L (pin ⑥③)	"H"	"L"	"H"	"L"
TBL-R (pin ⑥⑤)	"H"	"H"	"L"	"L"

*2 Disc tray slide motor (M801) control

Mode / Terminal	Stop	Table In	Table Out	Brake
LOAD-OUT (pin ⑥⑥)	"L"	"L"	"H"	"H"
LOAD-IN (pin ⑥⑦)	"L"	"H"	"L"	"H"

Pin No.	Pin Name	I/O	Description
77	AMS-IN	I	Whether a music is present or not from HA12215F (IC301) is detected at automatic music sensor “L”: music is present, “H”: music is not present
78	TC-MUTE	O	Line muting on/off selection signal output to the HA12215F (IC301) “L”: muting off, “H”: muting on
79	R/P-PASS	O	Recording/playback/pass selection signal output to the HA12215F (IC301) “L”: recording mode, “H”: pass, “Hi-z”: playback mode
80	NR-ON/OFF	O	Dolby NR on/off selection signal output to the HA12215F (IC301) “L”: dolby off, “H”: dolby on
81	REC-MUTE	O	Recording muting on/off selection signal output to the HA12215F (IC301) “L”: muting on, “H”: muting off
82	BIAS	O	Recording bias on/off selection signal output to the HA12215F (IC301) “L”: bias off, “H”: bias on
83	EQ-H/N	O	Normal/high speed selection signal output to the HA12215F (IC301) “L”: normal speed, “H”: high speed
84	PB-A/B	O	Deck-A/B selection signal output to the HA12215F (IC301) “L”: deck-A, “H”: deck-B
85	ALC-ON/OFF	O	Automatic limiter control signal output to the HA12215F (IC301) “L”: limiter on
86	B-PLAY-SW	I	Detection input from the deck- B play detect switch (S1002) “H”: deck-B play
87	A-PLAY-SW	I	Detection input from the deck- A play detect switch (S1001) “H”: deck-A play
88	A-HALF	I	Detection input from the deck-A cassette detect switch (S1003) “L”: cassette in, “H”: no cassette
89	B-HALF	I	Detection input from the deck-B half detect switch (S1006)
90	B-SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector (IC1002)
91	A-SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector (IC1001)
92	SOFT-TEST	O	Output terminal for the software test (open)
93	HEADPHONE MUTE	O	Muting on/off control signal output terminal “L”: muting on Not used (open)
94	KEY/CD ADJ	I	Setting terminal for the CD adjustment mode Not used (open)
95	MODEL-IN	I	Destination setting terminal
96	AVSS	—	Ground terminal (for A/D conversion)
97	SPEC-IN	I	Setting terminal for the version
98	AVREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	TC-RELAY	O	Recording/playback select signal output to the REC/PB switch (IC602) “L”: playback, “H”: recording

*3 Capstan motor (M1) control

Mode / Terminal	Stop	Forward Direction	Reverse Direction	Brake
CAPM-CNT1 (pin ⑮)	“L”	“L”	“H”	“H”
CAPM-CNT2 (pin ⑭)	“L”	“H”	“L”	“H”

• **PANEL BOARD IC601 TMP88CS76F-6004 (FLUORESCENT INDICATOR TUBE DRIVER, KEY CONTROL)**

Pin No.	Pin Name	I/O	Description
1	SIRCS	I	Remote control signal input from the remote control receiver (IC602)
2	JOG-A	I	Jog dial pulse input from the rotary encoder (S601 JOG) (A phase input)
3	LED SCK	O	Serial data transfer clock signal output to the LED driver (IC604)
4	LED LAT	O	Serial data latch pulse signal output to the LED driver (IC604)
5	LED DATA	O	Serial data output to the LED driver (IC604)
6	PAD LAT	O	Not used (open)
7	L SEL	O	LED selection signal output terminal
8	JOG-B	I	Jog dial pulse input from the rotary encoder (S601 JOG) (B phase input)
9	VOL-A	I	Jog dial pulse input from the rotary encoder (S602 VOLUME) (A phase input)
10	VOL-B	I	Jog dial pulse input from the rotary encoder (S602 VOLUME) (B phase input)
11	KEY0	I	Key input terminal (A/D input) (S625 to S630) REC PAUSE/START, HI-DUB, CD SYNC, LOOP, DISPLAY, SPECTRUM ANALYZER keys input
12	KEY1	I	Key input terminal (A/D input) (S611 to S624) SYNC BASS, SYNC EQ, KARAOKE PON/MPX, NON-STOP, SURROUND, DBFB, ENTER/NEXT, + ▶▶, – ◀◀, GROOVE, FLASH, REPEAT STEREO/MONO, PLAY MODE DOLBY NR, EDIT DIRECTION TUNER MEMORY keys input
13	KEY2	I	Key input terminal (A/D input) (S638 to S642 and S751 to S757) TIMER SELECT, P FILE MEMORY, GEQ CONTROL, FILE SELECT, EFFECT, I/⏻, (STANDBY) POWER SAVE DEMO, DISC 1/2/3, DISC SKIP EX-CHANGE, ⏏ keys input
14	KEY3	I	Key input terminal (A/D input) (S643 to S651) TUNER/BAND, ► II CD, ■, ► TAPE B, ◄ TAPE B, ► TAPE A, ◄ TAPE A, FUNCTION, CLOCK/TIMER SET keys input
15	GRAD L2	O	Not used (open)
16	S LOW FREQ (BPF0)	I	Spectrum analyzer drive (super low frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 40 Hz)
17	BPF1	I	Spectrum analyzer drive (low frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 100 Hz)
18	BPF2	I	Spectrum analyzer drive (low and middle frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 400 Hz)
19	BPF3	I	Spectrum analyzer drive (middle and high frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 2 kHz)
20	BPF4	I	Spectrum analyzer drive (high frequency) signal input from the spectrum analyzer band-pass filter (IC603) (for 6 kHz)
21	ALL BAND (L+R)	I	Spectrum analyzer drive signal input from the spectrum analyzer band-pass filter (IC603) (for VACS, non-stop signal)
22	WAKE UP	O	Wakeup control signal output to the system controller (IC501) "H" active
23	VSS	—	Ground terminal
24	VASS	—	Ground terminal (for A/D conversion)
25	VAREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
26	VDD	—	Power supply terminal (+5V)
27 to 32	G18 to G13	O	Grid drive signal output to the fluorescent indicator tube (FL601)
33 to 40	G12 to G5	O	Grid drive signal output to the fluorescent indicator tube (FL601)
41	VDD	—	Power supply terminal (+5V)
42 to 44	G4 to G2	O	Grid drive signal output to the fluorescent indicator tube (FL601)
45	G1	O	Grid drive signal output to the fluorescent indicator tube (FL601)
46 to 67	S1 to S22	O	Segment drive signal output to the fluorescent indicator tube (FL601)
68	VKK	—	Power supply terminal (–30V) (for fluorescent indicator tube drive)

Pin No.	Pin Name	I/O	Description
69	VDD	—	Power supply terminal (+5V)
70	XIN	I	System clock input terminal (12.5 MHz)
71	VSS	—	Ground terminal
72	XOUT	O	System clock output terminal (12.5 MHz)
73	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC502) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
74	CH	O	Not used (open)
75	BUSY	I	Not used (fixed at "L")
76	TEST	I	Connected to ground
77	GRAD R1	O	Not used (open)
78	I2C DATA	I/O	Communication data bus with the system controller (IC501)
79	I2C CLK	I/O	Communication data reading clock signal input or transfer clock signal output with the system controller (IC501)
80	GRAD R2	O	Not used (open)

SECTION 8
EXPLODED VIEWS

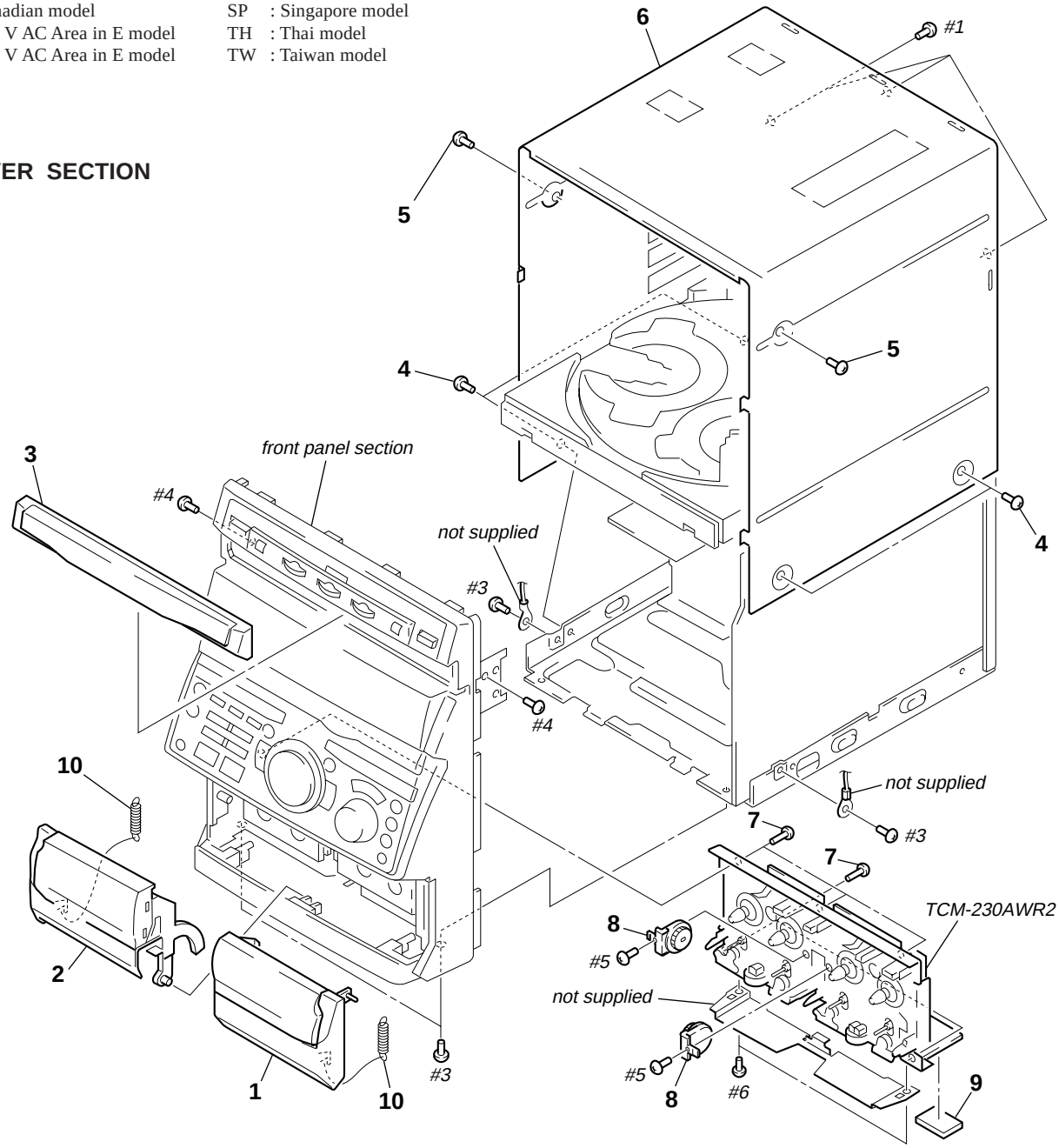
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AR : Argentine model
  AUS : Australian model
  CND : Canadian model
  E2 : 120 V AC Area in E model
  E3 : 240 V AC Area in E model
  EA3 : Saudi Arabia model
  MX : Mexican model
  SP : Singapore model
  TH : Thai model
  TW : Taiwan model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

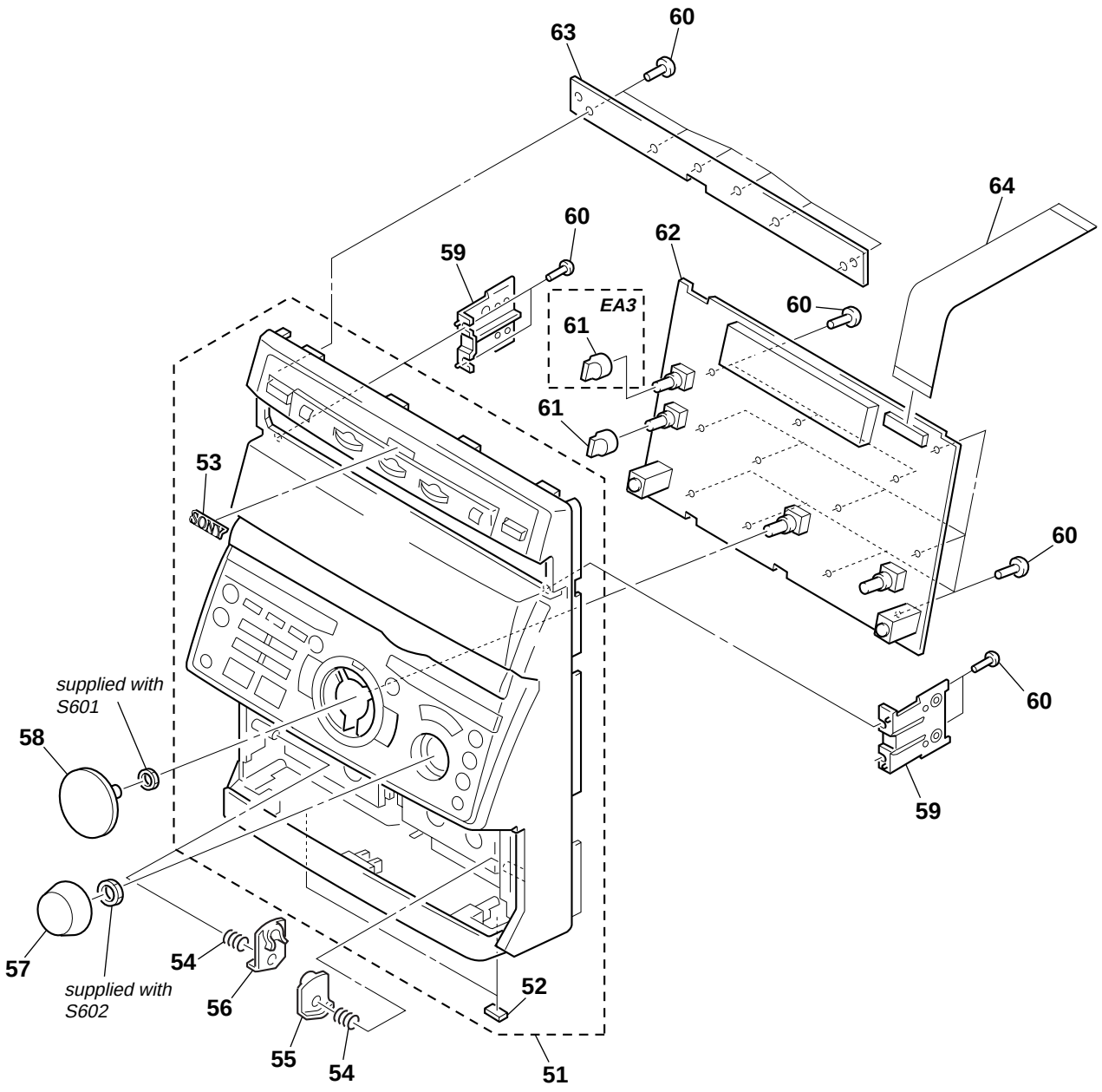
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) COVER SECTION



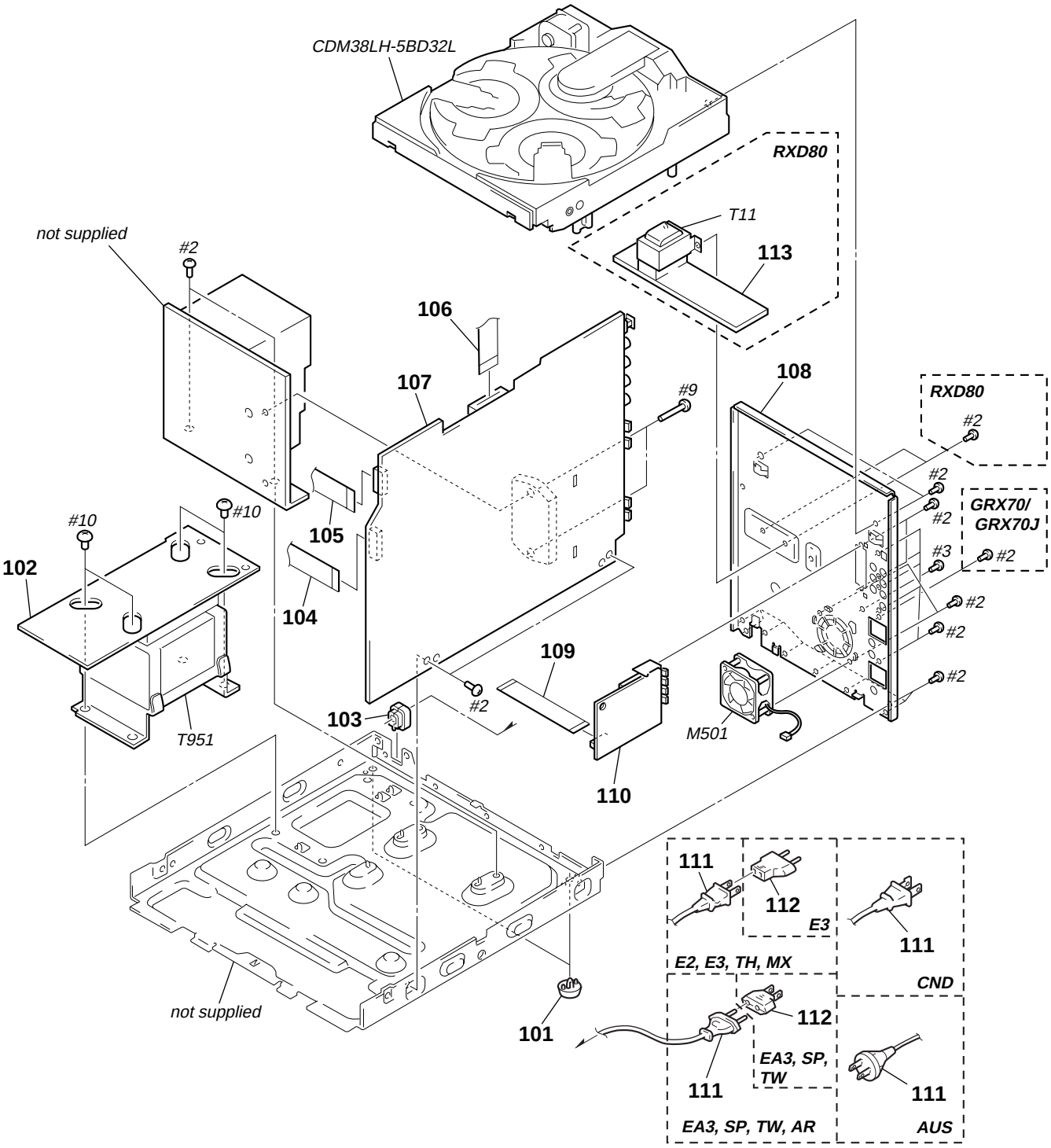
Ref. No.	Part No.	Description	Remark
1	X-4950-832-1	HOLDER (R) ASSY, CASSETTE (SILVER)	
1	X-4950-971-1	HOLDER (R) ASSY, CASSETTE (GRAY)	
2	X-4950-828-1	HOLDER (L) ASSY, CASSETTE (SILVER)	
2	X-4950-970-1	HOLDER (L) ASSY, CASSETTE (GRAY)	
3	X-4950-756-1	PANEL ASSY, LOADING (SILVER)	
3	X-4951-575-1	PANEL ASSY, LOADING (GRX70J)	
3	X-4951-580-1	PANEL ASSY, LOADING (RXD80)	
3	X-4951-581-1	PANEL ASSY, LOADING (GRX70: E3)	
4	3-363-099-01	SCREW (CASE 3 TP2) (3X8) (GRAY)	
4	3-363-099-11	SCREW (CASE 3 TP2) (3X8) (SILVER)	
5	3-363-099-41	SCREW (CASE 3 TP2) (3X12) (GRAY)	
5	3-363-099-71	SCREW (CASE 3 TP2) (3X12) (SILVER)	
* 6	4-214-443-01	COVER (SILVER)	
* 6	4-215-752-61	COVER (GRAY)	
7	4-951-620-01	SCREW (2.6X8), +BVTP	
8	4-215-062-01	DAMPER	
9	4-985-642-01	CUSHION	
10	4-219-087-01	SPRING, TENSION	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-4950-869-1	PANEL ASSY, FRONT (GRX70: E2, SP, TH, TW, MX, AR, AUS)	
51	X-4951-598-1	PANEL ASSY, FRONT (GRX70: E3/GRX70J: E3)	
51	X-4951-599-1	PANEL ASSY, FRONT (GRX70J: EA3)	
51	X-4951-600-1	PANEL ASSY, FRONT (RXD80)	
52	4-930-336-61	FOOT (FELT)	
53	4-962-708-71	EMBLEM (4-A), SONY	
54	4-214-775-11	SPRING, PUSH CATCHER RETURN	
55	4-214-761-11	CATCHER (B), PUSH	
56	4-214-760-11	CATCHER (A), PUSH	
57	4-214-384-11	KNOB (VOL) (SILVER)	
57	4-214-384-51	KNOB (VOL) (GRAY)	
58	4-214-383-11	KNOB (JOG) (SILVER)	
58	4-214-383-51	KNOB (JOG) (GRAY)	
* 59	4-996-716-01	HOLDER (CDM)	
60	4-951-620-01	SCREW (2.6X8), +BVTP	
61	4-214-385-11	KNOB (MIC) (SILVER)	
61	4-214-385-51	KNOB (MIC) (GRAY)	
* 62	A-4417-808-A	PANEL BOARD, COMPLETE (GRX70/RXD80)	
62	A-4419-985-A	PANEL BOARD, COMPLETE (GRX70J: E3)	
62	A-4426-002-A	PANEL BOARD, COMPLETE (GRX70J: EA3)	
* 63	A-4417-727-A	CD SW BOARD, COMPLETE	
64	1-773-188-11	WIRE (FLAT TYPE) (23 CORE)	

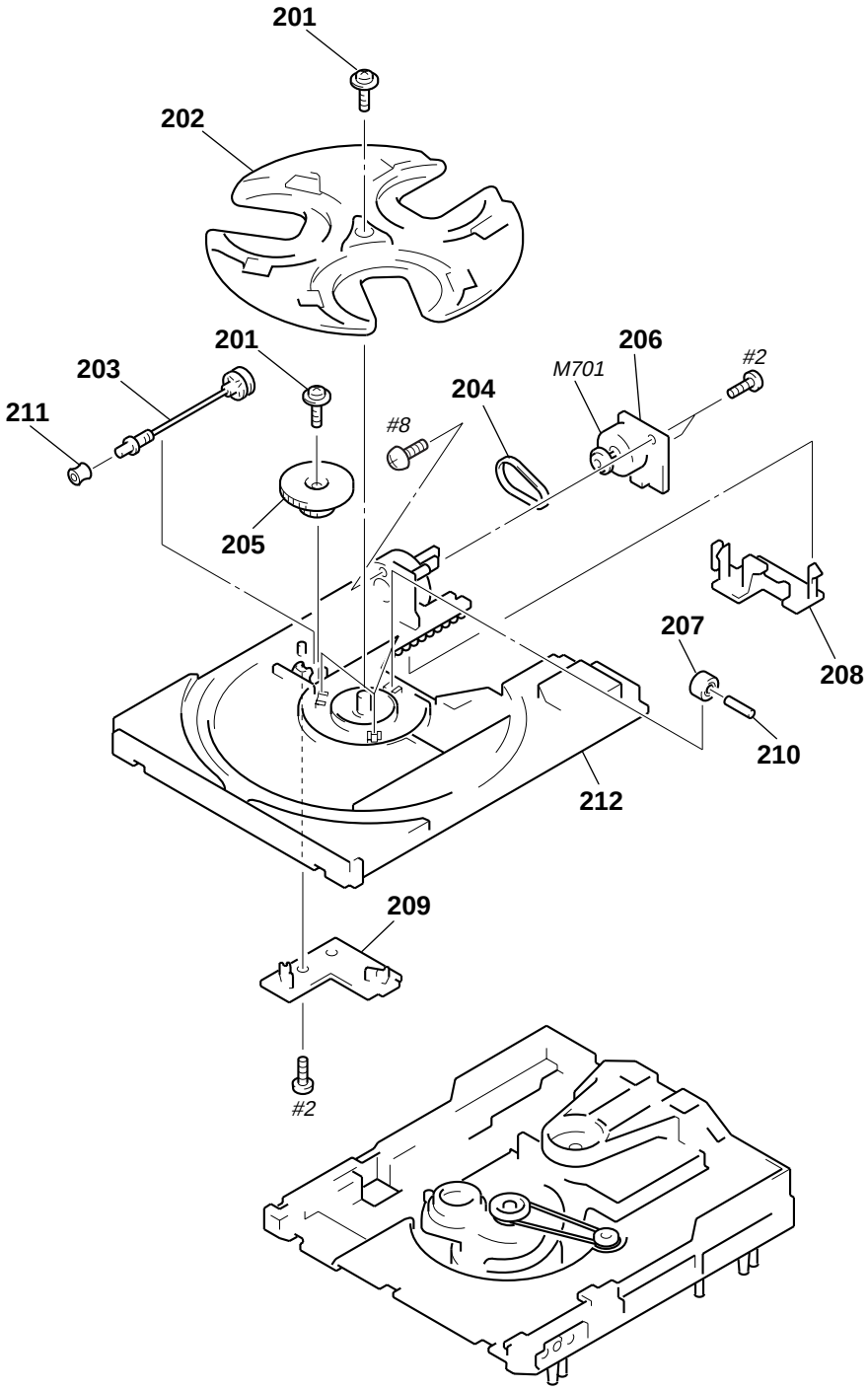
(3) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
101	4-965-822-01	FOOT	
* 102	1-672-369-11	TRANS BOARD	
* 103	3-703-244-00	BUSHING (2104), CORD (GRX70: SP, TW, AUS/GRX70J: EA3/RXD80)	
103	3-703-571-11	BUSHING (S) (4516), CORD (GRX70: E2, E3, TH, MX, AR/GRX70J: E3)	
104	1-773-042-11	WIRE (FLAT TYPE) (17 CORE) (14cm) (GRX70: E3, TW, AR, AUS/RXD80)	
104	1-773-043-11	WIRE (FLAT TYPE) (17 CORE) (15cm) (GRX70: E2, SP, TH, MX/GRX70J)	
105	1-773-024-11	WIRE (FLAT TYPE) (15 CORE) (32cm)	
106	1-783-570-11	WIRE (FLAT TYPE) (19 CORE)	
* 107	A-4417-812-A	MAIN BOARD, COMPLETE (GRX70: E2, MX, AR)	
* 107	A-4419-007-A	MAIN BOARD, COMPLETE (GRX70: E3, SP, TW)	
107	A-4419-816-A	MAIN BOARD, COMPLETE (RXD80)	
107	A-4419-828-A	MAIN BOARD, COMPLETE (GRX70: TH, AUS)	
107	A-4419-991-A	MAIN BOARD, COMPLETE (GRX70J: E3)	
* 107	A-4426-000-A	MAIN BOARD, COMPLETE (GRX70J: EA3)	
* 108	4-214-456-61	PANEL, BACK (GRX70: TH)	
* 108	4-215-169-01	PANEL, BACK (GRX70: E2, AR)	
* 108	4-215-169-11	PANEL, BACK (GRX70: SP)	
* 108	4-215-169-21	PANEL, BACK (GRX70: MX)	
* 108	4-215-169-31	PANEL, BACK (GRX70J: EA3)	
* 108	4-216-169-51	PANEL, BACK (GRX70J: E3)	
* 108	4-219-987-01	PANEL, BACK (RXD80)	
* 108	4-219-987-21	PANEL, BACK (GRX70: E3)	
* 108	4-219-987-31	PANEL, BACK (GRX70: TW)	
* 108	4-219-987-41	PANEL, BACK (GRX70: AUS)	
109	1-769-977-11	WIRE (FLAT TYPE) (13 CORE) (GRX70: E2, TH, MX, AR, AUS/ RXD80)	
109	1-773-009-11	WIRE (FLAT TYPE) (15 CORE) (15cm) (GRX70: E3, SP, TW/GRX70J)	
110	1-233-544-14	TUNER PACK (RXD80)	
110	1-233-545-11	TUNER (FM/AM) (GRX70: TH, AUS)	
110	1-233-545-14	TUNER PACK (GRX70: MX, AR)	
110	1-233-546-11	TUNER (FM/MW/SW) (GRX70: E3, SP, TW/GRX70J)	
110	1-693-453-11	TUNER (FM/AM) (GRX70: E2)	
⚠111	1-575-651-11	CORD, POWER (GRX70: SP, TW/GRX70J: EA3)	
⚠111	1-575-653-11	CORD, POWER (GRX70: E2, E3, TH, MX/GRX70J: E3)	
⚠111	1-690-608-11	CORD, POWER (GRX70: AUS)	
⚠111	1-690-609-21	CORD, POWER (RXD80: CND)	
⚠111	1-783-941-21	CORD, POWER (GRX70: AR)	
⚠112	1-569-007-11	ADAPTOR, CONVERSION 2P (GRX70: E3/GRX70J: E3)	
⚠112	1-569-008-21	ADAPTOR, CONVERSION 2P (GRX70: SP, TW/GRX70J: EA3)	
* 113	A-4417-729-A	SUB TRANS BOARD, COMPLETE (RXD80)	
M501	1-698-792-11	FAN, DC	
⚠T11	1-433-587-11	TRANSFORMER, POWER (RXD80)	
⚠T951	1-433-561-11	TRANSFORMER, POWER (GRX70/GRX70J)	
⚠T951	1-433-562-21	TRANSFORMER, POWER (RXD80)	

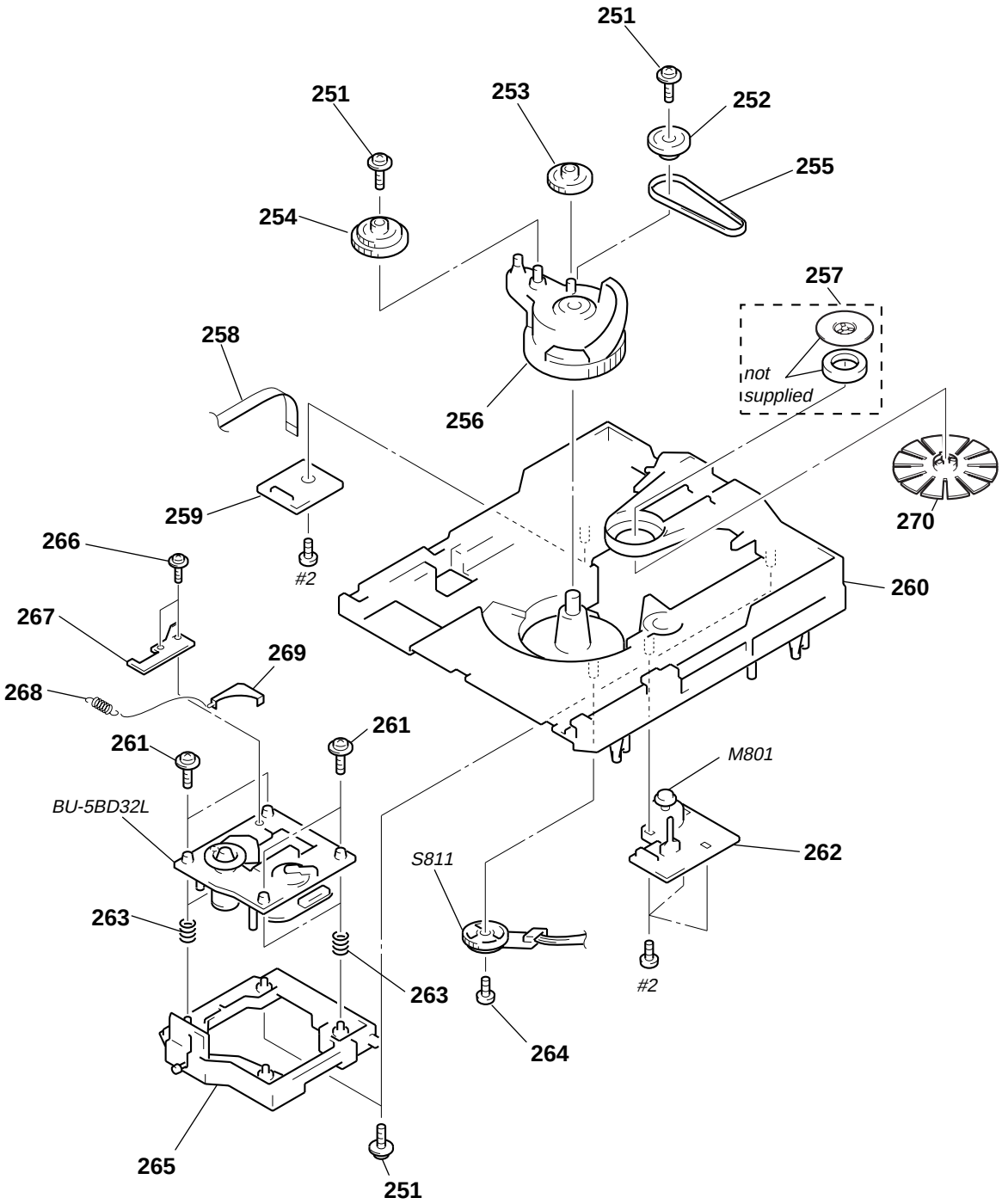
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(4) CD MECHANISM DECK SECITON-1 (CDM38LH-5BD32L)



Ref. No.	Part No.	Description	Remark
201	4-981-789-11	BRACKET (2), YOKE	
202	4-977-945-01	TRAY (TURN)	
203	X-4946-665-1	SHAFT ASSY, WORM	
204	4-977-943-01	BELT (TURN) (1.2)	
205	4-977-956-01	WHEEL, WORM	
* 206	1-658-577-11	MOTOR (TURN) BOARD	
207	4-988-162-01	ROLLER	
208	4-977-941-01	BEARING (WORM)	
* 209	1-658-576-11	SENSOR BOARD	
210	4-934-376-01	SHAFT (ROLLER)	
211	4-981-187-01	COLLAR (WORM)	
212	4-977-944-01	TRAY (SLIDE)	
M701	A-4672-004-A	MOTOR ASSY (DISC TRAY TURN)	

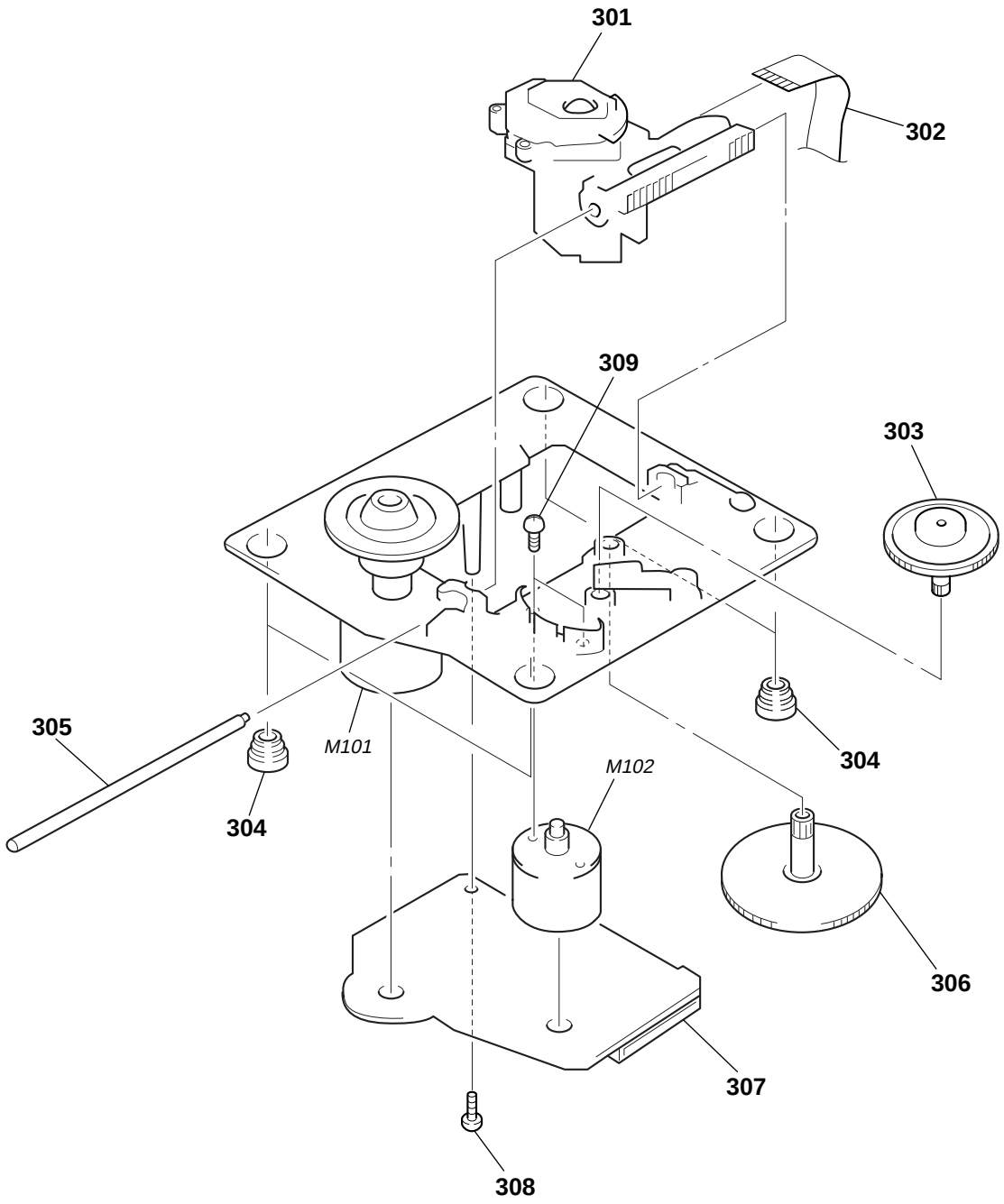
(5) CD MECHANISM DECK SECITON-2 (CDM38LH-5BD32L)



Ref. No.	Part No.	Description	Remark
251	4-981-789-11	BRACKET (2), YOKE	
252	4-977-954-01	PULLEY (SL)	
253	4-977-953-01	GEAR (SL-A)	
254	4-977-955-01	GEAR (SL-B)	
255	4-977-942-01	BELT (SL) (1.4)	
256	X-4946-667-1	CAM ASSY, BU	
257	1-452-925-21	MAGNET ASSY	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
* 259	1-658-575-11	CONNECTOR BOARD	
* 260	X-4946-668-1	CHASSIS (CDM) ASSY	
261	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	

Ref. No.	Part No.	Description	Remark
* 262	1-658-578-11	MOTOR (SLIDE) BOARD	
263	4-982-447-01	SPRING (BU), COMPRESSION	
264	4-951-620-41	SCREW (2.6), +BVTP	
265	X-4949-570-1	HOLDER (BU) ASSY	
266	4-989-494-01	SCREW (SLIDER), STEP	
267	4-989-492-11	SLIDER (38)	
268	4-989-819-02	SPRING, TENSION	
269	4-989-491-11	COVER (2), LENS	
270	4-993-142-21	PULLEY (L), PRESS	
M801	A-4672-004-A	MOTOR ASSY (DISC TRAY SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	

(6) BASE UNIT SECTION (BU-5BD32L)



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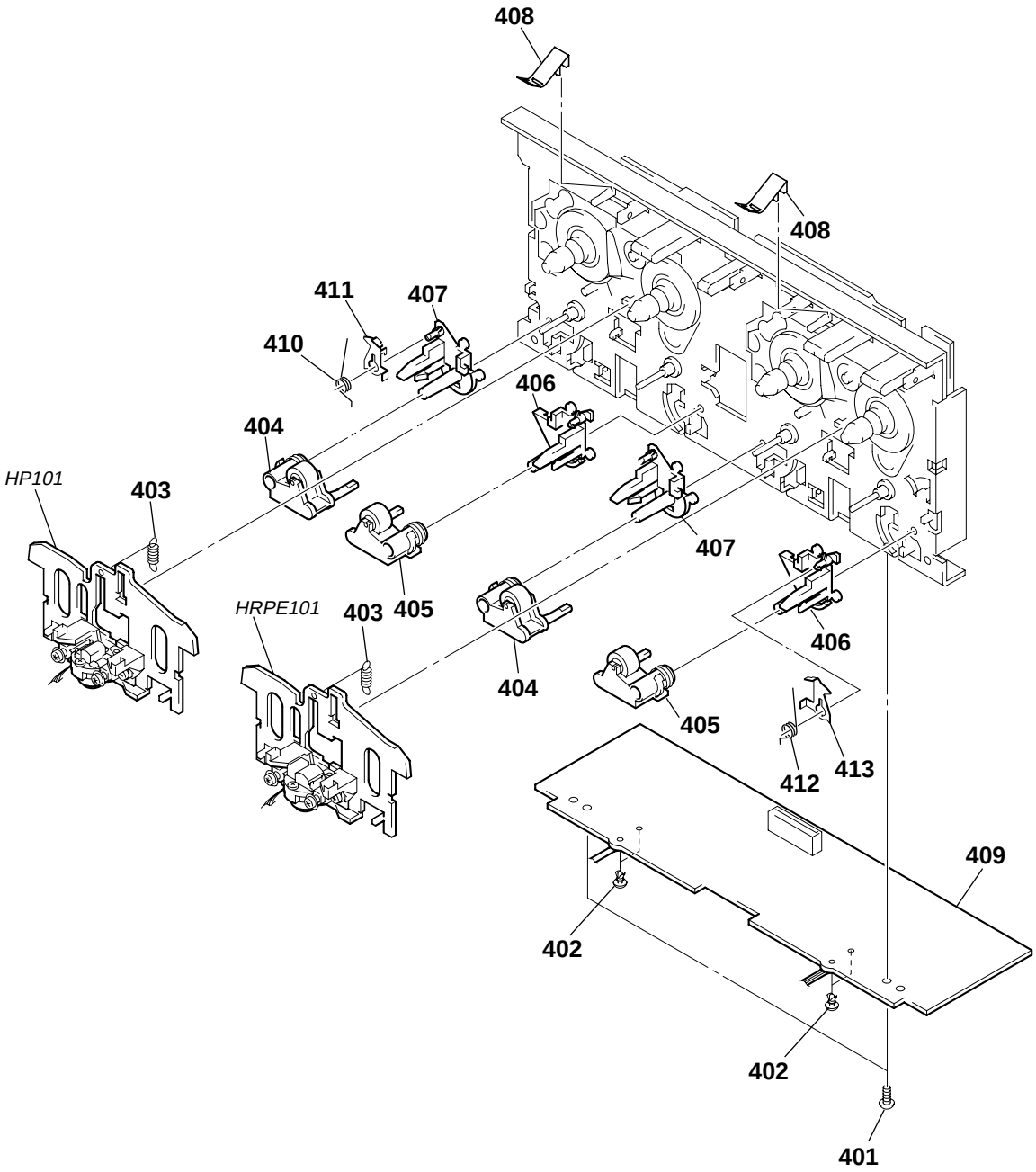
Ref. No.	Part No.	Description	Remark
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
303	4-917-567-01	GEAR (M)	
304	4-951-940-01	INSULATOR (BU)	
305	4-917-565-01	SHAFT, SLED	
306	4-917-564-01	GEAR (P), FLATNESS	
* 307	A-4724-486-A	BD BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
309	3-713-786-51	SCREW +P 2X3	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

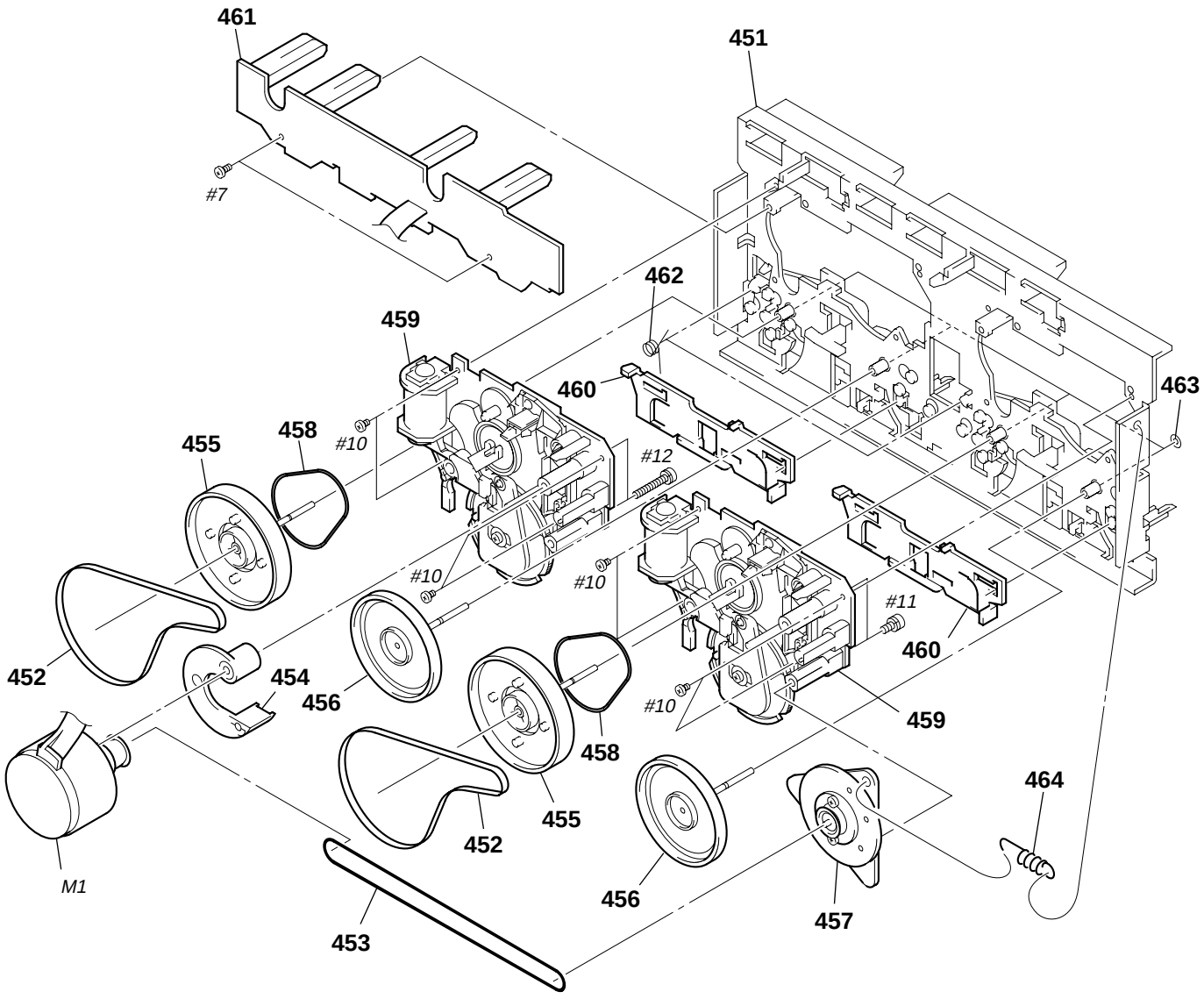
(7) TAPE MECHANISM DECK SECTION-1 (TCM-230AWR2)



Ref. No.	Part No.	Description	Remark
401	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
402	3-036-914-01	RIVET	
403	3-016-574-11	SPRING (HEAD), TENSION	
404	X-3374-156-4	PINCH LEVER (REV) ASSY	
405	X-3374-155-4	PINCH LEVER (FWD) ASSY	
406	3-016-564-01	BASE (PINCH LEVER FWD)	
407	3-016-565-01	BASE (PINCH LEVER REV)	
408	3-026-892-01	SPRING (CASSETTE), LEAF	

Ref. No.	Part No.	Description	Remark
* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	
410	3-032-809-02	SPRING (L), TORSION	
411	3-016-572-01	LEVER (EJECT PREVENTION L)	
412	3-032-810-02	SPRING (R), TORSION	
413	3-016-573-01	LEVER (EJECT PREVENTION R)	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD	
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD	

(8) TAPE MECHANISM DECK SECTION-2 (TCM-230AWR2)



Ref. No.	Part No.	Description	Remark
* 451	X-3374-214-3	CHASSIS ASSY, MAIN	
452	3-016-570-01	BELT (CAPSTAN)	
453	3-016-569-01	BELT (TENSION)	
454	3-017-360-01	BRACKET (MOTOR)	
455	X-3376-497-1	FLYWHEEL (FWD) ASSY	
456	X-3374-235-1	FLYWHEEL (REV) ASSY	
457	X-3374-238-1	PULLEY ASSY, TENSION	
458	3-024-405-01	BELT (FR2)	
459	A-2004-629-A	MECHANICAL BLOCK ASSY	
460	3-016-566-01	SLIDER, REVERSE	
* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
462	3-016-575-11	SPRING, TORSION	
463	3-019-208-01	WASHER, STOPPER	
464	3-027-453-01	SPRING (GROUND), TENSION	
465	3-030-823-01	SCREW (+BVTT) (2X3.5)	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

SECTION 9
ELECTRICAL PARTS LIST

AUDIO

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  CND : Canadian model
  E2 : 120 V AC Area in E model
  E3 : 240 V AC Area in E model
  EA3 : Saudi Arabia model
  MX : Mexican model
  SP : Singapore model
  TH : Thai model
  TW : Taiwan model

Ref. No.	Part No.	Description			Remark
*	A-2007-731-A	AUDIO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-126-968-11	ELECT	100uF	20%	6.3V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-107-715-11	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-126-233-11	ELECT	22uF	20%	50V
C331	1-137-427-11	FILM	120PF	5%	50V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-126-968-11	ELECT	100uF	20%	6.3V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-107-715-11	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-126-233-11	ELECT	22uF	20%	50V
C431	1-137-427-11	FILM	120PF	5%	50V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-104-396-11	ELECT	10uF	20%	16V
C602	1-104-396-11	ELECT	10uF	20%	16V
C611	1-104-396-11	ELECT	10uF	20%	16V
C612	1-104-396-11	ELECT	10uF	20%	16V
C621	1-137-150-11	FILM	0.01uF	5%	100V
C622	1-126-961-11	ELECT	2.2uF	20%	50V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-104-664-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description				Remark
		< CONNECTOR >				
CN601	1-568-834-11	SOCKET, CONNECTOR 15P				
		< IC >				
IC601	8-759-111-44	IC uPC4570C-1				
IC602	8-759-143-54	IC uPC1330HA				
IC611	8-759-111-44	IC uPC4570C-1				
		< COIL >				
L331	1-410-780-11	INDUCTOR	27mH			
L431	1-410-780-11	INDUCTOR	27mH			
L601	1-414-193-41	INDUCTOR	220uH			
L602	1-414-193-41	INDUCTOR	220uH			
		< TRANSISTOR >				
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR	2SD1387			
		< RESISTOR >				
R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	
R411	1-247-881-00	CARBON	120K	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-882-11	CARBON	130K	5%	1/4W	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	
R431	1-249-430-11	CARBON	12K	5%	1/4W	
R601	1-249-409-11	CARBON	220	5%	1/4W	

AUDIO BD

Ref. No.	Part No.	Description			Remark
R602	1-249-409-11	CARBON	220	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-241-768-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-241-768-11	RES, ADJ, CARBON 220K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-4724-486-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C114	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT CHIP	100uF	20%	4V
C118	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C122	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C123	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C124	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C125	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C126	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C127	1-128-065-11	ELECT CHIP	68uF	20%	10V
C128	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C129	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C130	1-164-346-11	CERAMIC CHIP	1uF		16V
C131	1-124-779-00	ELECT CHIP	10uF	20%	16V
C133	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-164-346-11	CERAMIC CHIP	1uF		16V
C141	1-164-346-11	CERAMIC CHIP	1uF		16V

Ref. No.	Part No.	Description			Remark
C143	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C156	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C157	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C162	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C163	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C165	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C167	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C168	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C171	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C172	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C181	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C182	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
		< CONNECTOR >			
CN101	1-778-874-11	CONNECTOR,FFC (LIF(NON-ZIF)) 19P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< FERRITE BEAD >			
FB101	1-500-445-21	FERRITE 0uH			
FB103	1-500-445-21	FERRITE 0uH			
		< IC >			
IC101	8-752-386-85	IC CXD2587Q			
IC102	8-759-549-28	IC BA5974FP-E2			
IC103	8-752-085-51	IC CXA2568M-T6			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-91	RES,CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-049-11	RES,CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-00	RES,CHIP	1M	5%	1/10W
R110	1-216-025-00	RES,CHIP	100	5%	1/10W
R111	1-216-121-00	RES,CHIP	1M	5%	1/10W
R113	1-216-121-00	RES,CHIP	1M	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R116	1-216-001-00	METAL CHIP	10	5%	1/10W
R117	1-216-049-11	RES,CHIP	1K	5%	1/10W
R119	1-216-041-00	METAL CHIP	470	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	RES,CHIP	100K	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R147	1-216-069-00	METAL CHIP	6.8K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-111-00	METAL CHIP	390K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R171	1-216-078-00	RES,CHIP	16K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R173	1-216-077-00	METAL CHIP	15K	5%	1/10W
R181	1-216-078-00	RES,CHIP	16K	5%	1/10W
R182	1-216-073-00	METAL CHIP	10K	5%	1/10W
R183	1-216-077-00	METAL CHIP	15K	5%	1/10W
		< NETWORK RESISTER >			
RN101	1-233-576-11	RES, CHIP NETWORK 100			
RN102	1-233-576-11	RES, CHIP NETWORK 100			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
*	A-4417-727-A	CD SW BOARD, COMPLETE			
		**********			
		< DIODE >			
D751	8-719-056-13	LED SML79423C-TP15 (DISC 1)			
D752	8-719-056-13	LED SML79423C-TP15 (DISC 2)			
D753	8-719-056-13	LED SML79423C-TP15 (DISC 3)			
D754	8-719-063-93	LED SLR325VC-N-T32 (**I**/⏻)			
		< RESISTOR >			
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-418-11	CARBON	1.2K	5%	1/4W
R753	1-249-420-11	CARBON	1.8K	5%	1/4W
R754	1-249-422-11	CARBON	2.7K	5%	1/4W
R755	1-247-843-11	CARBON	3.3K	5%	1/4W
R756	1-249-425-11	CARBON	4.7K	5%	1/4W
R757	1-249-427-11	CARBON	6.8K	5%	1/4W
R758	1-247-804-11	CARBON	75	5%	1/4W
R759	1-249-407-11	CARBON	150	5%	1/4W
R760	1-247-804-11	CARBON	75	5%	1/4W
R761	1-249-407-11	CARBON	150	5%	1/4W
R762	1-247-804-11	CARBON	75	5%	1/4W
R763	1-249-407-11	CARBON	150	5%	1/4W
R764	1-249-414-11	CARBON	560	5%	1/4W
		< SWITCH >			
S751	1-762-875-21	SWITCH, KEYBOARD (**I**/⏻)			
S752	1-762-875-21	SWITCH, KEYBOARD ((STANDBY) POWER SAVE DEMO)			
S753	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S754	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S755	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S756	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP EX-CHANGE)			
S757	1-762-875-21	SWITCH, KEYBOARD (⏏)			
**********					
*	1-658-575-11	CONNECTOR BOARD			
		**********			
		< CONNECTOR >			
* CN701	1-568-946-11	PIN, CONNECTOR 8P			
CN702	1-750-550-11	CONNECTOR, FFC/FPC 8P			
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W
**********					
*	A-2007-732-A	LEAF SW BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1001	1-107-716-11	ELECT	33uF	20%	10V
		< CONNECTOR >			
CN1001	1-568-860-11	SOCKET, CONNECTOR 17P			
		< DIODE >			
D1001	8-719-911-19	DIODE 1SS119			
D1002	8-719-911-19	DIODE 1SS119			
		< CONNECTOR >			
* DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P			
		< PHOTO INTERRUPTER >			
IC1001	8-749-014-38	PHOTO INTERRUPTER SG-264			
IC1002	8-749-014-38	PHOTO INTERRUPTER SG-264			
		< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR DTA144ESA			
		< RESISTOR >			
R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W
R1002	1-249-409-11	CARBON	220	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-856-00	CARBON	11K	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W
		< VARIABLE RESISTOR >			
RV1001	1-241-785-11	RES, ADJ, CARBON 10K			
RV1002	1-241-785-11	RES, ADJ, CARBON 10K			

LEAF SW | MAIN

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK A PLAY)	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK B PLAY)	
S1003	1-771-333-11	SWITCH, LEAF (DECK A HALF)	
S1004	1-771-205-11	SWITCH, LEAF (DECK A 120/70)	
S1005	1-771-205-11	SWITCH, LEAF (DECK A REC)	
S1006	1-771-333-11	SWITCH, LEAF (DECK B HALF)	
S1008	1-771-205-11	SWITCH, LEAF (DECK B 120/70)	
S1009	1-771-205-11	SWITCH, LEAF (DECK B REC)	
**********			
*	A-4417-812-A	MAIN BOARD, COMPLETE	
			(GRX70: E2, MX, AR)
*	A-4419-007-A	MAIN BOARD, COMPLETE	
			(GRX70: E3, SP, TW)
	A-4419-816-A	MAIN BOARD, COMPLETE (RXD80)	
	A-4419-828-A	MAIN BOARD, COMPLETE	
			(GRX70: TH, AUS)
	A-4419-991-A	MAIN BOARD, COMPLETE (GRX70J: E3)	
*	A-4426-000-A	MAIN BOARD, COMPLETE (GRX70J: EA3)	
		**********	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C104	1-164-159-11	CERAMIC 0.1uF	50V
C111	1-137-195-11	FILM 0.56uF 5%	50V
C112	1-136-158-00	FILM 0.027uF 5%	50V
C113	1-136-167-00	FILM 0.15uF 5%	50V
C114	1-130-480-00	MYLAR 0.0056uF 5%	50V
C115	1-136-159-00	FILM 0.033uF 5%	50V
C116	1-130-473-00	MYLAR 0.0015uF 5%	50V
C117	1-136-153-00	FILM 0.01uF 5%	50V
C118	1-162-288-31	CERAMIC 330PF 10%	50V
C119	1-130-479-00	MYLAR 0.0047uF 5%	50V
C120	1-130-477-00	MYLAR 0.0033uF 5%	50V
C121	1-126-964-11	ELECT 10uF 20%	50V
C122	1-162-291-31	CERAMIC 560PF 10%	50V
C123	1-136-169-00	FILM 0.22uF 5%	50V
C124	1-136-169-00	FILM 0.22uF 5%	50V
C125	1-126-964-11	ELECT 10uF 20%	50V
C131	1-104-664-11	ELECT 47uF 20%	16V
C132	1-104-664-11	ELECT 47uF 20%	16V
C135	1-126-964-11	ELECT 10uF 20%	50V
C141	1-126-959-11	ELECT 0.47uF 20%	50V
C161	1-137-195-11	FILM 0.56uF 5%	50V
C162	1-136-158-00	FILM 0.027uF 5%	50V
C163	1-136-167-00	FILM 0.15uF 5%	50V
C164	1-130-480-00	MYLAR 0.0056uF 5%	50V
C165	1-136-159-00	FILM 0.033uF 5%	50V
C166	1-130-473-00	MYLAR 0.0015uF 5%	50V
C167	1-136-153-00	FILM 0.01uF 5%	50V
C168	1-162-288-31	CERAMIC 330PF 10%	50V
C169	1-130-479-00	MYLAR 0.0047uF 5%	50V
C170	1-130-477-00	MYLAR 0.0033uF 5%	50V
C171	1-126-964-11	ELECT 10uF 20%	50V
C172	1-162-291-31	CERAMIC 560PF 10%	50V
C173	1-136-169-00	FILM 0.22uF 5%	50V
C174	1-136-169-00	FILM 0.22uF 5%	50V

Ref. No.	Part No.	Description	Remark
C175	1-126-964-11	ELECT 10uF 20%	50V
C176	1-136-495-11	FILM 0.068uF 5%	50V
C177	1-136-153-00	FILM 0.01uF 5%	50V
C193	1-126-964-11	ELECT 10uF 20%	50V
C197	1-164-159-11	CERAMIC 0.1uF	50V
C301	1-126-960-11	ELECT 1uF 20%	50V
C302	1-130-479-00	MYLAR 0.0047uF 5%	50V
C303	1-136-165-00	FILM 0.1uF 5%	50V
C304	1-136-165-00	FILM 0.1uF 5%	50V
C305	1-126-964-11	ELECT 10uF 20%	50V
C306	1-126-960-11	ELECT 1uF 20%	50V
C307	1-126-959-11	ELECT 0.47uF 20%	50V
C308	1-126-964-11	ELECT 10uF 20%	50V
C309	1-137-194-81	FILM 0.47uF 5%	50V
C310	1-162-290-31	CERAMIC 470PF 10%	50V
C311	1-126-964-11	ELECT 10uF 20%	50V
C312	1-126-959-11	ELECT 0.47uF 20%	50V
C313	1-162-294-31	CERAMIC 0.001uF 10%	50V
C314	1-126-964-11	ELECT 10uF 20%	50V
C315	1-126-963-11	ELECT 4.7uF 20%	50V
C316	1-104-665-11	ELECT 100uF 20%	10V
C317	1-104-665-11	ELECT 100uF 20%	10V
C320	1-162-290-31	CERAMIC 470PF 10%	50V
C333	1-162-600-11	CERAMIC 0.0047uF 30%	16V
C334	1-162-600-11	CERAMIC 0.0047uF 30%	16V
C351	1-126-960-11	ELECT 1uF 20%	50V
C352	1-130-479-00	MYLAR 0.0047uF 5%	50V
C353	1-136-165-00	FILM 0.1uF 5%	50V
C354	1-136-165-00	FILM 0.1uF 5%	50V
C355	1-126-964-11	ELECT 10uF 20%	50V
C356	1-126-960-11	ELECT 1uF 20%	50V
C357	1-126-959-11	ELECT 0.47uF 20%	50V
C358	1-126-964-11	ELECT 10uF 20%	50V
C359	1-137-194-81	FILM 0.47uF 5%	50V
C382	1-104-665-11	ELECT 100uF 20%	10V
C390	1-126-935-11	ELECT 470uF 20%	6.3V
C391	1-161-494-00	CERAMIC 0.022uF	25V
C392	1-126-916-11	ELECT 1000uF 20%	6.3V
C393	1-161-494-00	CERAMIC 0.022uF	25V
C394	1-126-925-11	ELECT 470uF 20%	10V
C396	1-126-961-11	ELECT 2.2uF 20%	50V
C397	1-126-961-11	ELECT 2.2uF 20%	50V
C410	1-126-963-11	ELECT 4.7uF 20%	50V
C411	1-162-306-11	CERAMIC 0.01uF 20%	16V
C412	1-107-717-11	ELECT 47uF 20%	50V
C432	1-104-665-11	ELECT 100uF 20%	10V
C433	1-126-961-11	ELECT 2.2uF 20%	50V
C437	1-126-968-11	ELECT 100uF 20%	50V
C501	1-126-964-11	ELECT 10uF 20%	50V
C502	1-164-159-11	CERAMIC 0.1uF	50V
C503	1-136-165-00	FILM 0.1uF 5%	50V
C504	1-126-926-11	ELECT 1000uF 20%	10V
C508	1-109-889-11	ELECT 1uF 20%	50V
C610	1-102-953-00	CERAMIC 18PF 5%	50V
C611	1-102-514-11	CERAMIC 22PF 5%	50V
C614	1-162-306-11	CERAMIC 0.01uF 20%	16V
C616	1-104-665-11	ELECT 100uF 20%	10V

Ref. No.	Part No.	Description			Remark
C662	1-162-306-11	CERAMIC	0.01uF	20%	16V
C664	1-104-665-11	ELECT	100uF	20%	10V
C698	1-162-306-11	CERAMIC	0.01uF	20%	16V
C699	1-104-665-11	ELECT	100uF	20%	10V
C801	1-126-963-11	ELECT	4.7uF	20%	50V (GRX70/GRX70J)
C801	1-128-581-11	ELECT	4.7uF	20%	100V (RXD80)
C802	1-162-290-31	CERAMIC	470PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-104-665-11	ELECT	100uF	20%	10V
C807	1-136-495-11	FILM	0.068uF	5%	50V
C808	1-136-495-11	FILM	0.068uF	5%	50V
C809	1-128-560-11	ELECT	22uF	20%	100V
C810	1-128-578-11	ELECT	1uF	20%	100V
C811	1-162-306-11	CERAMIC	0.01uF	20%	16V
C812	1-162-306-11	CERAMIC	0.01uF	20%	16V
C841	1-127-811-11	ELECT	3300uF	20%	50V (GRX70/GRX70J)
C842	1-127-752-11	ELECT	3300uF	20%	63V (RXD80)
C842	1-127-814-11	ELECT	3300uF	20%	80V (GRX70/GRX70J)
C843	1-136-165-00	FILM	0.1uF	5%	50V (GRX70/GRX70J)
C844	1-130-777-00	FILM	0.1uF	10%	100V
C851	1-126-963-11	ELECT	4.7uF	20%	50V (GRX70/GRX70J)
C851	1-128-581-11	ELECT	4.7uF	20%	100V (RXD80)
C852	1-162-290-31	CERAMIC	470PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-104-665-11	ELECT	100uF	20%	10V
C857	1-136-495-11	FILM	0.068uF	5%	50V
C858	1-136-495-11	FILM	0.068uF	5%	50V
C859	1-128-560-11	ELECT	22uF	20%	100V
C881	1-126-967-11	ELECT	47uF	20%	50V
C891	1-127-811-11	ELECT	3300uF	20%	50V (GRX70/GRX70J)
C892	1-127-752-11	ELECT	3300uF	20%	63V (RXD80)
C892	1-127-814-11	ELECT	3300uF	20%	80V (GRX70/GRX70J)
C893	1-136-165-00	FILM	0.1uF	5%	50V (GRX70/GRX70J)
C894	1-130-777-00	FILM	0.1uF	10%	100V
C901	1-136-165-00	FILM	0.1uF	5%	50V
C902	1-126-936-11	ELECT	3300uF	20%	16V (RXD80)
C902	1-126-937-11	ELECT	4700uF	20%	16V (GRX70/GRX70J)
C903	1-126-933-11	ELECT	100uF	20%	16V
C904	1-104-664-11	ELECT	47uF	20%	16V
C905	1-104-665-11	ELECT	100uF	20%	10V
C906	1-136-165-00	FILM	0.1uF	5%	50V
C907	1-128-548-11	ELECT	4700uF	20%	25V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-104-665-11	ELECT	100uF	20%	10V
C911	1-126-964-11	ELECT	10uF	20%	50V
C912	1-126-926-11	ELECT	1000uF	20%	10V
C913	1-126-964-11	ELECT	10uF	20%	50V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C915	1-104-664-11	ELECT	47uF	20%	16V
C916	1-162-306-11	CERAMIC	0.01uF	20%	16V
C917	1-126-933-11	ELECT	100uF	20%	16V
C951	1-136-165-00	FILM	0.1uF	5%	50V
C952	1-126-768-11	ELECT	2200uF	20%	16V
C953	1-126-933-11	ELECT	100uF	20%	16V
C955	1-104-665-11	ELECT	100uF	20%	10V
C956	1-136-165-00	FILM	0.1uF	5%	50V
		< CONNECTOR >			
CN303	1-784-776-11	CONNECTOR, FFC 15P			
CN304	1-784-778-11	CONNECTOR, FFC 17P			
CN371	1-784-774-11	CONNECTOR, FFC 13P			(GRX70: E2, TH, MX, AR/RXD80)
CN371	1-784-776-11	CONNECTOR, FFC 15P			(GRX70: E3, SP, TW, AUS/GRX70J)
CN391	1-784-741-11	CONNECTOR, FFC 19P			
CN392	1-785-334-11	PIN, CONNECTOR (LIGHT ANGLE) 8P			
CN393	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE) 9P			
* CN403	1-564-518-11	PLUG, CONNECTOR 3P			
CN501	1-784-784-11	CONNECTOR, FFC 23P			
		< DIODE >			
D141	8-719-911-19	DIODE 1SS119			
D191	8-719-911-19	DIODE 1SS119			
D331	8-719-911-19	DIODE 1SS119			
D333	8-719-911-19	DIODE 1SS119			
D334	8-719-911-19	DIODE 1SS119			
D335	8-719-911-19	DIODE 1SS119			
D401	8-719-911-19	DIODE 1SS119			
D403	8-719-911-19	DIODE 1SS119			
D405	8-719-024-99	DIODE 11ES2-NTA2B			
D406	8-719-024-99	DIODE 11ES2-NTA2B			
D407	8-719-024-99	DIODE 11ES2-NTA2B			
D411	8-719-911-19	DIODE 1SS119			
D501	8-719-024-99	DIODE 11ES2-NTA2B			
D502	8-719-911-19	DIODE 1SS119			
D503	8-719-911-19	DIODE 1SS119			
D504	8-719-911-19	DIODE 1SS119			
D505	8-719-911-19	DIODE 1SS119			
D506	8-719-911-19	DIODE 1SS119			
D509	8-719-911-19	DIODE 1SS119			
D607	8-719-911-19	DIODE 1SS119			
D644	8-719-911-19	DIODE 1SS119			
D801	8-719-911-19	DIODE 1SS119			
D802	8-719-160-64	DIODE RD16F-B1			
D803	8-719-911-19	DIODE 1SS119			
D831	8-719-302-38	DIODE RBV-602-01			
D832	8-719-302-38	DIODE RBV-602-01 (GRX70/GRX70J)			
D851	8-719-911-19	DIODE 1SS119			
D852	8-719-160-64	DIODE RD16F-B1			
D881	8-719-911-19	DIODE 1SS119			
D901	8-719-024-99	DIODE 11ES2-NTA2B			
D902	8-719-024-99	DIODE 11ES2-NTA2B			
D903	8-719-024-99	DIODE 11ES2-NTA2B			
D904	8-719-024-99	DIODE 11ES2-NTA2B			

MAIN

Ref. No.	Part No.	Description	Remark
D905	8-719-933-36	DIODE HZS6B1L	
D906	8-719-911-19	DIODE 1SS119	
D907	8-719-024-99	DIODE 11ES2-NTA2B	
D908	8-719-024-99	DIODE 11ES2-NTA2B	
D909	8-719-024-99	DIODE 11ES2-NTA2B	
D910	8-719-024-99	DIODE 11ES2-NTA2B	
D915	8-719-935-69	DIODE HZS11B1LTA	
D921	8-719-911-19	DIODE 1SS119 (GRX70/GRX70J)	
D922	8-719-911-19	DIODE 1SS119 (GRX70/GRX70J)	
D923	8-719-911-19	DIODE 1SS119 (GRX70/GRX70J)	
D924	8-719-024-99	DIODE 11ES2-NTA2B (GRX70/GRX70J)	
D925	8-719-024-99	DIODE 11ES2-NTA2B (GRX70/GRX70J)	
		< FERRITE BEAD >	
FB301	1-412-473-21	FERRITE 0uH	
FB302	1-412-473-21	FERRITE 0uH	
		< IC >	
IC101	8-759-571-54	IC M62493FP	
IC301	8-759-495-26	IC HA12215	
IC381	8-749-923-04	IC TOTX178 (CD DIGITAL OUT OPTICAL)	
IC501	8-759-588-89	IC M30622MA-A07FP	
IC502	8-759-635-63	IC M51943BSL	
IC801	8-749-015-37	IC STK411-240E (GRX70/GRX70J)	
IC801	8-749-015-45	IC STK407-090E (RXD80)	
IC901	8-759-604-86	IC M5F7807L	
IC902	8-759-231-53	IC TA7805S	
IC903	8-759-088-08	IC uPC7812AHF	
		< JACK >	
J101	1-774-411-11	JACK, PIN 6P (VIDEO (AUDIO) IN, MD IN/OUT)	
J191	1-774-785-11	JACK, PIN 1P (SUPER WOOFER)	
		< COIL >	
L381	1-410-521-11	INDUCTOR 100uH	
L392	1-410-521-11	INDUCTOR 100uH	
L501	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q111	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q112	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q161	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q162	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q163	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q191	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q192	8-729-900-63	TRANSISTOR DTA124ES	
Q201	8-729-900-36	TRANSISTOR DTC124ES	
Q251	8-729-900-36	TRANSISTOR DTC124ES	
Q331	8-729-118-00	TRANSISTOR 2SB1116-L	
Q332	8-729-900-80	TRANSISTOR DTC114ES	
Q333	8-729-118-00	TRANSISTOR 2SB1116-L	
Q334	8-729-900-80	TRANSISTOR DTC114ES	
Q335	8-729-900-80	TRANSISTOR DTC114ES	
Q336	8-729-116-59	TRANSISTOR 2SB1068TP	
Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q338	8-729-422-57	TRANSISTOR UN4111	
Q339	8-729-900-80	TRANSISTOR DTC114ES	
Q340	8-729-116-59	TRANSISTOR 2SB1068TP	
Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q342	8-729-422-57	TRANSISTOR UN4111	
Q343	8-729-900-80	TRANSISTOR DTC114ES	
Q401	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q402	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q411	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q412	8-729-900-63	TRANSISTOR DTA124ES	
Q431	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q432	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q433	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q434	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q435	8-729-900-36	TRANSISTOR DTC124ES	
Q436	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q437	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q439	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q471	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q501	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q508	8-729-900-63	TRANSISTOR DTA124ES	
Q509	8-729-900-63	TRANSISTOR DTA124ES	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q803	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q804	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q831	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q832	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q881	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q901	8-729-209-15	TRANSISTOR 2SD2012	
Q902	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q903	8-729-900-36	TRANSISTOR DTC124ES	
Q904	8-729-900-36	TRANSISTOR DTC124ES	
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q907	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q908	8-729-900-36	TRANSISTOR DTC124ES	
Q909	8-729-026-68	TRANSISTOR 2SD2525 (TP)	
Q913	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q914	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q923	8-729-900-36	TRANSISTOR DTC124ES	
Q951	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q952	8-729-119-77	TRANSISTOR 2SA1175-FEK	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W	
R102	1-249-417-11	CARBON 1K 5% 1/4W	
R103	1-249-417-11	CARBON 1K 5% 1/4W	
R111	1-249-429-11	CARBON 10K 5% 1/4W	
R112	1-247-895-00	CARBON 470K 5% 1/4W	
R113	1-247-894-11	CARBON 430K 5% 1/4W	
R114	1-249-415-11	CARBON 680 5% 1/4W	
R115	1-249-433-11	CARBON 22K 5% 1/4W	
R116	1-247-887-00	CARBON 220K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-437-11	CARBON 47K 5% 1/4W	
R119	1-249-421-11	CARBON 2.2K 5% 1/4W	
R120	1-249-441-11	CARBON 100K 5% 1/4W	
R121	1-249-429-11	CARBON 10K 5% 1/4W	
R124	1-249-421-11	CARBON 2.2K 5% 1/4W	

Ref. No.	Part No.	Description			Remark
R125	1-247-843-11	CARBON	3.3K	5%	1/4W
R126	1-249-421-11	CARBON	2.2K	5%	1/4W
R130	1-249-433-11	CARBON	22K	5%	1/4W
R131	1-247-807-31	CARBON	100	5%	1/4W
R132	1-247-807-31	CARBON	100	5%	1/4W
R133	1-247-807-31	CARBON	100	5%	1/4W
R141	1-249-433-11	CARBON	22K	5%	1/4W
R142	1-249-433-11	CARBON	22K	5%	1/4W
R143	1-249-417-11	CARBON	1K	5%	1/4W
R144	1-249-441-11	CARBON	100K	5%	1/4W
R145	1-247-903-00	CARBON	1M	5%	1/4W
R151	1-249-417-11	CARBON	1K	5%	1/4W
R152	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-417-11	CARBON	1K	5%	1/4W
R161	1-249-429-11	CARBON	10K	5%	1/4W
R162	1-247-895-00	CARBON	470K	5%	1/4W
R163	1-247-894-11	CARBON	430K	5%	1/4W
R164	1-249-415-11	CARBON	680	5%	1/4W
R165	1-249-433-11	CARBON	22K	5%	1/4W
R166	1-247-887-00	CARBON	220K	5%	1/4W
R167	1-249-429-11	CARBON	10K	5%	1/4W
R168	1-249-437-11	CARBON	47K	5%	1/4W
R169	1-249-421-11	CARBON	2.2K	5%	1/4W
R170	1-249-441-11	CARBON	100K	5%	1/4W
R171	1-249-429-11	CARBON	10K	5%	1/4W
R178	1-249-421-11	CARBON	2.2K	5%	1/4W
R190	1-249-441-11	CARBON	100K	5%	1/4W
R196	1-249-417-11	CARBON	1K	5%	1/4W
R197	1-249-441-11	CARBON	100K	5%	1/4W
R198	1-249-417-11	CARBON	1K	5%	1/4W
R199	1-249-429-11	CARBON	10K	5%	1/4W
R201	1-247-888-11	CARBON	240K	5%	1/4W
R202	1-247-903-00	CARBON	1M	5%	1/4W
R251	1-247-888-11	CARBON	240K	5%	1/4W
R252	1-247-903-00	CARBON	1M	5%	1/4W
R301	1-249-435-11	CARBON	33K	5%	1/4W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W
R303	1-247-807-31	CARBON	100	5%	1/4W
R304	1-247-807-31	CARBON	100	5%	1/4W
R305	1-249-421-11	CARBON	2.2K	5%	1/4W
R306	1-249-428-11	CARBON	8.2K	5%	1/4W
R307	1-249-428-11	CARBON	8.2K	5%	1/4W
R308	1-249-425-11	CARBON	4.7K	5%	1/4W
R309	1-249-433-11	CARBON	22K	5%	1/4W
R311	1-247-903-00	CARBON	1M	5%	1/4W
R312	1-247-884-11	CARBON	160K	5%	1/4W
R313	1-249-441-11	CARBON	100K	5%	1/4W
R315	1-249-429-11	CARBON	10K	5%	1/4W
R316	1-249-432-11	CARBON	18K	5%	1/4W
R317	1-249-429-11	CARBON	10K	5%	1/4W
R318	1-249-429-11	CARBON	10K	5%	1/4W
R319	1-247-893-11	CARBON	390K	5%	1/4W
R321	1-249-422-11	CARBON	2.7K	5%	1/4W
R322	1-249-428-11	CARBON	8.2K	5%	1/4W
R324	1-247-876-11	CARBON	75K	5%	1/4W
R325	1-247-876-11	CARBON	75K	5%	1/4W
R326	1-249-437-11	CARBON	47K	5%	1/4W
R327	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R328	1-249-437-11	CARBON	47K	5%	1/4W
R329	1-249-417-11	CARBON	1K	5%	1/4W
R330	1-249-425-11	CARBON	4.7K	5%	1/4W
R331	1-249-425-11	CARBON	4.7K	5%	1/4W
R332	1-249-415-11	CARBON	680	5%	1/4W
R333	1-249-421-11	CARBON	2.2K	5%	1/4W
R334	1-249-415-11	CARBON	680	5%	1/4W
R335	1-249-421-11	CARBON	2.2K	5%	1/4W
R336	1-249-437-11	CARBON	47K	5%	1/4W
R337	1-249-417-11	CARBON	1K	5%	1/4W
R338	1-249-411-11	CARBON	330	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W
R341	1-249-411-11	CARBON	330	5%	1/4W
R342	1-249-437-11	CARBON	47K	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W
R351	1-249-435-11	CARBON	33K	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-249-421-11	CARBON	2.2K	5%	1/4W
R356	1-249-428-11	CARBON	8.2K	5%	1/4W
R357	1-249-428-11	CARBON	8.2K	5%	1/4W
R358	1-249-425-11	CARBON	4.7K	5%	1/4W
R359	1-249-435-11	CARBON	33K	5%	1/4W
R391	1-247-807-31	CARBON	100	5%	1/4W
R392	1-247-807-31	CARBON	100	5%	1/4W
R393	1-249-435-11	CARBON	33K	5%	1/4W
R394	1-249-435-11	CARBON	33K	5%	1/4W
R406	1-249-437-11	CARBON	47K	5%	1/4W
R407	1-249-437-11	CARBON	47K	5%	1/4W
R408	1-249-425-11	CARBON	4.7K	5%	1/4W
R409	1-249-441-11	CARBON	100K	5%	1/4W
R410	1-249-421-11	CARBON	2.2K	5%	1/4W
⚠R411	1-215-893-11	METAL OXIDE	1.5K	5%	2W F (RXD80)
⚠R411	1-215-894-11	METAL OXIDE	2.2K	5%	2W F (GRX70/GRX70J)
R413	1-249-402-11	CARBON	56	5%	1/4W
R414	1-249-417-11	CARBON	1K	5%	1/4W
R415	1-249-429-11	CARBON	10K	5%	1/4W
R416	1-249-437-11	CARBON	47K	5%	1/4W
R417	1-249-417-11	CARBON	1K	5%	1/4W
R421	1-260-089-11	CARBON	150	5%	1/2W
R422	1-260-089-11	CARBON	150	5%	1/2W
R431	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W
R434	1-249-433-11	CARBON	22K	5%	1/4W
R435	1-249-435-11	CARBON	33K	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W
R438	1-249-429-11	CARBON	10K	5%	1/4W
R439	1-249-425-11	CARBON	4.7K	5%	1/4W
R440	1-249-433-11	CARBON	22K	5%	1/4W
R441	1-249-435-11	CARBON	33K	5%	1/4W
R443	1-249-417-11	CARBON	1K	5%	1/4W
R471	1-260-089-11	CARBON	150	5%	1/2W
R472	1-260-089-11	CARBON	150	5%	1/2W
R473	1-249-402-11	CARBON	56	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

MAIN

Ref. No.	Part No.	Description			Remark
R474	1-249-417-11	CARBON	1K	5%	1/4W
R481	1-260-089-11	CARBON	150	5%	1/2W
R482	1-260-089-11	CARBON	150	5%	1/2W
R483	1-260-089-11	CARBON	150	5%	1/2W
R484	1-260-089-11	CARBON	150	5%	1/2W
R501	1-249-413-11	CARBON	470	5%	1/4W
R502	1-249-425-11	CARBON	4.7K	5%	1/4W
R503	1-249-437-11	CARBON	47K	5%	1/4W
R504	1-249-437-11	CARBON	47K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R508	1-249-421-11	CARBON	2.2K	5%	1/4W
R509	1-249-441-11	CARBON	100K	5%	1/4W
R521	1-249-425-11	CARBON	4.7K	5%	1/4W
R522	1-249-411-11	CARBON	330	5%	1/4W
R523	1-249-421-11	CARBON	2.2K	5%	1/4W
				(GRX70: E2, MX, AR)	
R523	1-249-425-11	CARBON	4.7K	5%	1/4W
			(GRX70: TH, AUS/GRX70J: EA3)		
R524	1-247-843-11	CARBON	3.3K	5%	1/4W
				(GRX70J: EA3)	
R524	1-249-411-11	CARBON	330	5%	1/4W
				(GRX70: TH, AUS)	
R524	1-249-425-11	CARBON	4.7K	5%	1/4W
				(GRX70: E2, MX, AR)	
R527	1-249-429-11	CARBON	10K	5%	1/4W
R536	1-249-429-11	CARBON	10K	5%	1/4W
R550	1-247-843-11	CARBON	3.3K	5%	1/4W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R567	1-247-807-31	CARBON	100	5%	1/4W
R568	1-249-429-11	CARBON	10K	5%	1/4W
R569	1-249-429-11	CARBON	10K	5%	1/4W
R570	1-249-429-11	CARBON	10K	5%	1/4W
R571	1-249-429-11	CARBON	10K	5%	1/4W
R577	1-249-429-11	CARBON	10K	5%	1/4W
R610	1-247-891-00	CARBON	330K	5%	1/4W
R617	1-249-429-11	CARBON	10K	5%	1/4W
R618	1-247-807-31	CARBON	100	5%	1/4W
R619	1-247-807-31	CARBON	100	5%	1/4W
R622	1-249-425-11	CARBON	4.7K	5%	1/4W
R626	1-247-807-31	CARBON	100	5%	1/4W
R627	1-247-807-31	CARBON	100	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W
R630	1-247-807-31	CARBON	100	5%	1/4W
R632	1-247-807-31	CARBON	100	5%	1/4W
R633	1-247-807-31	CARBON	100	5%	1/4W
R635	1-249-413-11	CARBON	470	5%	1/4W
R636	1-247-807-31	CARBON	100	5%	1/4W
R637	1-249-417-11	CARBON	1K	5%	1/4W
R639	1-247-807-31	CARBON	100	5%	1/4W
R642	1-247-807-31	CARBON	100	5%	1/4W
R643	1-247-807-31	CARBON	100	5%	1/4W
R649	1-247-807-31	CARBON	100	5%	1/4W
R650	1-247-807-31	CARBON	100	5%	1/4W
R651	1-247-807-31	CARBON	100	5%	1/4W
R652	1-247-807-31	CARBON	100	5%	1/4W
R653	1-247-807-31	CARBON	100	5%	1/4W
R654	1-247-807-31	CARBON	100	5%	1/4W
R655	1-247-807-31	CARBON	100	5%	1/4W
R656	1-247-807-31	CARBON	100	5%	1/4W
R657	1-247-807-31	CARBON	100	5%	1/4W
R658	1-249-417-11	CARBON	1K	5%	1/4W
R659	1-247-807-31	CARBON	100	5%	1/4W
R660	1-247-807-31	CARBON	100	5%	1/4W
R661	1-247-807-31	CARBON	100	5%	1/4W
R663	1-247-807-31	CARBON	100	5%	1/4W
R665	1-247-807-31	CARBON	100	5%	1/4W
R666	1-247-807-31	CARBON	100	5%	1/4W
R667	1-247-807-31	CARBON	100	5%	1/4W
R668	1-247-807-31	CARBON	100	5%	1/4W
R669	1-247-807-31	CARBON	100	5%	1/4W
R670	1-247-807-31	CARBON	100	5%	1/4W
R671	1-247-807-31	CARBON	100	5%	1/4W
R686	1-247-807-31	CARBON	100	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W
R690	1-247-807-31	CARBON	100	5%	1/4W
R691	1-247-807-31	CARBON	100	5%	1/4W
R801	1-249-417-11	CARBON	1K	5%	1/4W
R802	1-249-438-11	CARBON	56K	5%	1/4W
R803	1-247-822-11	CARBON	430	5%	1/4W
					(GRX70J)
R803	1-249-411-11	CARBON	330	5%	1/4W
					(GRX70)
R803	1-249-414-11	CARBON	560	5%	1/4W
					(RXD80)
R804	1-249-438-11	CARBON	56K	5%	1/4W
R805	1-249-417-11	CARBON	1K	5%	1/4W
R806	1-249-431-11	CARBON	15K	5%	1/4W
R807	1-249-441-11	CARBON	100K	5%	1/4W
⚠R808	1-220-893-11	METAL	0.22	10%	5W
R809	1-260-076-11	CARBON	10	5%	1/2W
R810	1-260-105-11	CARBON	3.3K	5%	1/2W
⚠R811	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R812	1-202-972-61	FUSIBLE	1	5%	1/4W F
R813	1-249-435-11	CARBON	33K	5%	1/4W
R814	1-249-421-11	CARBON	2.2K	5%	1/4W
R815	1-249-433-11	CARBON	22K	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R817	1-249-421-11	CARBON	2.2K	5%	1/4W
R818	1-249-435-11	CARBON	33K	5%	1/4W
R819	1-249-439-11	CARBON	68K	5%	1/4W
R831	1-249-441-11	CARBON	100K	5%	1/4W
R832	1-249-441-11	CARBON	100K	5%	1/4W
R833	1-249-436-11	CARBON	39K	5%	1/4W
R842	1-249-441-11	CARBON	100K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-247-822-11	CARBON	430	5%	1/4W
					(GRX70J)
R853	1-249-411-11	CARBON	330	5%	1/4W
					(GRX70)
R853	1-249-414-11	CARBON	560	5%	1/4W
					(RXD80)
R854	1-249-438-11	CARBON	56K	5%	1/4W
R855	1-249-417-11	CARBON	1K	5%	1/4W
R856	1-249-431-11	CARBON	15K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description			Remark
R857	1-249-441-11	CARBON	100K	5%	1/4W
⚠R858	1-220-893-11	METAL	0.22	10%	5W
R859	1-260-076-11	CARBON	10	5%	1/2W
R860	1-260-105-11	CARBON	3.3K	5%	1/2W
⚠R861	1-212-881-11	FUSIBLE	100	5%	1/4W F
R881	1-249-435-11	CARBON	33K	5%	1/4W
R882	1-249-435-11	CARBON	33K	5%	1/4W
R892	1-249-441-11	CARBON	100K	5%	1/4W
R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R902	1-249-415-11	CARBON	680	5%	1/4W
R903	1-249-419-11	CARBON	1.5K	5%	1/4W
R904	1-249-414-11	CARBON	560	5%	1/4W
R905	1-249-425-11	CARBON	4.7K	5%	1/4W
R906	1-247-843-11	CARBON	3.3K	5%	1/4W
R907	1-249-415-11	CARBON	680	5%	1/4W
R908	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-249-430-11	CARBON	12K	5%	1/4W
R911	1-249-409-11	CARBON	220	5%	1/4W
R920	1-249-383-11	CARBON	1.5	5%	1/6W
R921	1-249-383-11	CARBON	1.5	5%	1/6W
R931	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-600-11	RES, ADJ, CARBON 10K			
RV351	1-238-600-11	RES, ADJ, CARBON 10K			
		< RELAY >			
RY401	1-755-168-11	RELAY			
		< THERMISTOR >			
TH831	1-807-796-11	THERMISTOR			
		< TERMINAL >			
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN)			(SPEAKER)
TM402	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER) (GRX70/GRX70J)			
		< VIBRATOR >			
X601	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X613	1-781-107-21	VIBRATOR, SERAMIC (16MHz)			
**********					
*	1-658-578-11	MOTOR (SLIDE) BOARD			
		**********			
		< CAPACITOR >			
C801	1-162-306-11	CERAMIC	0.01uF	20%	16V
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V
C805	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN801	1-568-947-11	PIN, CONNECTOR 9P			
		< DIODE >			
D801	8-719-921-48	DIODE MTZJ-T-72-5.6C			
D804	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
		< IC >			
IC801	8-759-274-09	IC BA6286N			
		< RESISTOR >			
R801	1-249-401-11	CARBON	47	5%	1/4W
		< SWITCH >			
S801	1-762-527-11	SWITCH, ROTARY (OPEN/CLOSE DET)			
**********					
*	1-658-577-11	MOTOR (TURN) BOARD			
		**********			
		< CAPACITOR >			
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V
C702	1-126-964-11	ELECT	10uF	20%	50V
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P			
CN703	1-785-550-11	CONNECTOR, FFC/FPC 8P			
CN704	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B			
		< IC >			
IC701	8-759-633-65	IC M54641L			
		< RESISTOR >			
R706	1-249-411-11	CARBON	330	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W
**********					
*	A-4417-808-A	PANEL BOARD, COMPLETE (GRX70/RXD80)			
	A-4419-985-A	PANEL BOARD, COMPLETE (GRX70J: E3)			
	A-4426-002-A	PANEL BOARD, COMPLETE (GRX70J: EA3)			
		**********			
*	4-214-439-11	HOLDER, FL TUBE			
		< CAPACITOR >			
C601	1-124-589-11	ELECT	47uF	20%	16V
C602	1-126-163-11	ELECT	4.7uF	20%	50V
C603	1-162-306-11	CERAMIC	0.01uF	20%	16V
C604	1-164-159-11	CERAMIC	0.1uF		50V
C606	1-126-160-11	ELECT	1uF	20%	50V
C607	1-126-160-11	ELECT	1uF	20%	50V
C610	1-124-589-11	ELECT	47uF	20%	16V
C611	1-162-306-11	CERAMIC	0.01uF	20%	16V
C612	1-162-306-11	CERAMIC	0.01uF	20%	16V
C614	1-162-306-11	CERAMIC	0.01uF	20%	16V
C615	1-162-306-11	CERAMIC	0.01uF	20%	16V
C616	1-126-157-11	ELECT	10uF	20%	16V
C617	1-162-303-11	CERAMIC	0.0033uF	30%	16V

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PANEL

Ref. No.	Part No.	Description			Remark
C618	1-126-157-11	ELECT	10uF	20%	16V
C619	1-126-157-11	ELECT	10uF	20%	16V
C620	1-126-163-11	ELECT	4.7uF	20%	50V
C625	1-126-157-11	ELECT	10uF	20%	16V
C627	1-162-306-11	CERAMIC	0.01uF	20%	16V
C628	1-126-157-11	ELECT	10uF	20%	16V
C630	1-162-306-11	CERAMIC	0.01uF	20%	16V
C651	1-162-282-31	CERAMIC	100PF	10%	50V
C652	1-162-282-31	CERAMIC	100PF	10%	50V
C653	1-162-282-31	CERAMIC	100PF	10%	50V
C654	1-162-282-31	CERAMIC	100PF	10%	50V
C655	1-162-282-31	CERAMIC	100PF	10%	50V
C656	1-162-282-31	CERAMIC	100PF	10%	50V
C657	1-162-282-31	CERAMIC	100PF	10%	50V
C658	1-162-282-31	CERAMIC	100PF	10%	50V
C659	1-162-282-31	CERAMIC	100PF	10%	50V
C660	1-162-282-31	CERAMIC	100PF	10%	50V
C661	1-162-282-31	CERAMIC	100PF	10%	50V
C662	1-162-282-31	CERAMIC	100PF	10%	50V
C663	1-162-282-31	CERAMIC	100PF	10%	50V
C664	1-162-282-31	CERAMIC	100PF	10%	50V
C665	1-162-282-31	CERAMIC	100PF	10%	50V
C666	1-162-282-31	CERAMIC	100PF	10%	50V
C667	1-162-282-31	CERAMIC	100PF	10%	50V
C668	1-162-282-31	CERAMIC	100PF	10%	50V
C701	1-162-294-31	CERAMIC	0.001uF	10%	50V
C702	1-162-294-31	CERAMIC	0.001uF	10%	50V
C703	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-162-294-31	CERAMIC	0.001uF	10%	50V (GRX70J: EA3)
C712	1-162-305-11	CERAMIC	0.0068uF	30%	16V (GRX70J: EA3)
C713	1-126-160-11	ELECT	1uF	20%	50V (GRX70J: EA3)
C714	1-136-495-11	FILM	0.068uF	5%	50V (GRX70J: EA3)
C715	1-124-465-00	ELECT	0.47uF	20%	50V (GRX70J: EA3)
C716	1-124-465-00	ELECT	0.47uF	20%	50V (GRX70J: EA3)
C717	1-136-167-00	FILM	0.15uF	5%	50V (GRX70J: EA3)
C718	1-162-294-31	CERAMIC	0.001uF	10%	50V (GRX70J: EA3)
C719	1-126-160-11	ELECT	1uF	20%	50V (GRX70J: EA3)
C720	1-161-494-00	CERAMIC	0.022uF		25V (GRX70J: EA3)
C721	1-162-305-11	CERAMIC	0.0068uF	30%	16V (GRX70J: EA3)
C722	1-136-495-11	FILM	0.068uF	5%	50V (GRX70J: EA3)
C723	1-124-589-11	ELECT	47uF	20%	16V (GRX70J: EA3)
C724	1-136-165-00	FILM	0.1uF	5%	50V (GRX70J: EA3)
C725	1-124-589-11	ELECT	47uF	20%	16V (GRX70J: EA3)
C731	1-162-306-11	CERAMIC	0.01uF	20%	16V
C732	1-124-257-00	ELECT	2.2uF	20%	50V
C733	1-162-294-31	CERAMIC	0.001uF	10%	50V
C734	1-162-215-31	CERAMIC	47PF	5%	50V
C735	1-124-261-00	ELECT	10uF	20%	50V
C736	1-162-290-31	CERAMIC	470PF	10%	50V
C737	1-124-463-00	ELECT	0.1uF	20%	50V
C738	1-124-257-00	ELECT	2.2uF	20%	50V (GRX70J: EA3)
C739	1-162-215-31	CERAMIC	47PF	5%	50V
C741	1-124-261-00	ELECT	10uF	20%	50V
C742	1-162-282-31	CERAMIC	100PF	10%	50V
C743	1-124-257-00	ELECT	2.2uF	20%	50V
C747	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN601	1-784-745-11	CONNECTOR, FFC 23P			
		< DIODE >			
D610	8-719-050-84	DIODE RB441Q-40T-72			
D611	8-719-073-47	LED SML72923C-TP15 (REC PAUSE/START)			
D612	8-719-056-13	LED SML79423C-TP15 (▶II CD)			
D613	8-719-058-03	LED SEL5423E-TP15 (► TAPE B)			
D614	8-719-058-03	LED SEL5423E-TP15 (◄ TAPE B)			
D615	8-719-058-03	LED SEL5423E-TP15 (► TAPE A)			
D616	8-719-058-03	LED SEL5423E-TP15 (◄ TAPE A)			
D619	8-719-057-97	LED SEL5923A-TP15 (SYNC BASS L)			
D620	8-719-057-97	LED SEL5923A-TP15 (SYNC BASS H)			
D621	8-719-057-97	LED SEL5923A-TP15 (SYNC EQ)			
D622	8-719-063-93	LED SLR325VC-N-T32 (EFFECT)			
D624	8-719-063-93	LED SLR325VC-N-T32 (NON-STOP)			
D627	8-719-057-97	LED SEL5923A-TP15 (GROOVE)			
D628	8-719-063-93	LED SLR325VC-N-T32 (ENTER/NEXT)			
D629	8-719-063-93	LED SLR325VC-N-T32 (JOG DIAL)			
D630	8-719-057-97	LED SEL5923A-TP15 (- ▶▶)			
D631	8-719-057-97	LED SEL5923A-TP15 (+ ◀◀)			
D632	8-719-063-93	LED SLR325VC-N-T32 (TIMER SELECT)			
D701	8-719-109-85	DIODE RD5.1ES-B2 (GRX70J: EA3)			
		< EARTH TERMINAL >			
* EP601	1-537-738-21	TERMINAL, EARTH			
		< FERRITE BEAD >			
FB601	1-412-473-21	FERRITE 0uH			
FB602	1-412-473-21	FERRITE 0uH			
		< FLUORESCENT INDICATOR TUBE >			
FL601	1-517-831-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC601	8-759-589-13	IC TMP88CS76F-6004			
IC602	8-749-011-05	IC GP1U28X			
IC603	8-759-083-77	IC BA3830F			
IC604	8-759-342-19	IC NJU3716M-T2			
IC711	8-759-496-40	IC M65850FP (GRX70J: EA3)			
IC712	8-759-636-55	IC M5218AFP			

Ref. No.	Part No.	Description			Remark
		< JACK >			
J701	1-785-569-11	JACK (SMALL TYPE) (PHONES)			
J711	1-785-569-11	JACK (SMALL TYPE) (MIX MIC)			
		< COIL >			
L601	1-410-509-11	INDUCTOR	10uH		
L602	1-410-517-11	INDUCTOR	47uH		
		< TRANSISTOR >			
Q601	8-729-118-00	TRANSISTOR	2SB1116-L		
Q602	8-729-118-00	TRANSISTOR	2SB1116-L		
Q603	8-729-119-78	TRANSISTOR	2SC403SP-51		
Q604	8-729-422-57	TRANSISTOR	UN4111		
Q605	8-729-422-57	TRANSISTOR	UN4111		
Q606	8-729-900-80	TRANSISTOR	DTC114ES		
Q607	8-729-900-74	TRANSISTOR	DTC143TS		
Q608	8-729-900-74	TRANSISTOR	DTC143TS		
Q609	8-729-900-74	TRANSISTOR	DTC143TS		
Q610	8-729-900-74	TRANSISTOR	DTC143TS		
Q611	8-729-900-74	TRANSISTOR	DTC143TS		
Q612	8-729-900-74	TRANSISTOR	DTC143TS		
Q613	8-729-900-74	TRANSISTOR	DTC143TS		
		< RESISTOR >			
R600	1-247-903-00	CARBON	1M	5%	1/4W
R601	1-247-807-31	CARBON	100	5%	1/4W
R602	1-249-429-11	CARBON	10K	5%	1/4W
R603	1-247-807-31	CARBON	100	5%	1/4W
R604	1-247-807-31	CARBON	100	5%	1/4W
R605	1-249-429-11	CARBON	10K	5%	1/4W
R606	1-249-401-11	CARBON	47	5%	1/4W
R607	1-247-893-11	CARBON	390K	5%	1/4W
R608	1-247-893-11	CARBON	390K	5%	1/4W
R609	1-249-441-11	CARBON	100K	5%	1/4W
R610	1-249-429-11	CARBON	10K	5%	1/4W
R611	1-249-441-11	CARBON	100K	5%	1/4W
R612	1-249-401-11	CARBON	47	5%	1/4W
R613	1-249-435-11	CARBON	33K	5%	1/4W
R614	1-247-895-00	CARBON	470K	5%	1/4W
R615	1-249-429-11	CARBON	10K	5%	1/4W
R616	1-249-441-11	CARBON	100K	5%	1/4W
R617	1-249-441-11	CARBON	100K	5%	1/4W
R618	1-249-441-11	CARBON	100K	5%	1/4W
R619	1-249-441-11	CARBON	100K	5%	1/4W
R620	1-249-441-11	CARBON	100K	5%	1/4W
R621	1-249-429-11	CARBON	10K	5%	1/4W
R622	1-249-410-11	CARBON	270	5%	1/4W
R623	1-249-411-11	CARBON	330	5%	1/4W
R624	1-249-413-11	CARBON	470	5%	1/4W
R625	1-249-414-11	CARBON	560	5%	1/4W
R626	1-249-415-11	CARBON	680	5%	1/4W
R627	1-249-417-11	CARBON	1K	5%	1/4W
R628	1-249-418-11	CARBON	1.2K	5%	1/4W
R629	1-249-420-11	CARBON	1.8K	5%	1/4W
R630	1-249-422-11	CARBON	2.7K	5%	1/4W
R631	1-247-843-11	CARBON	3.3K	5%	1/4W
R632	1-249-425-11	CARBON	4.7K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R633	1-249-427-11	CARBON	6.8K	5%	1/4W
R634	1-249-429-11	CARBON	10K	5%	1/4W
R635	1-249-431-11	CARBON	15K	5%	1/4W
R636	1-249-429-11	CARBON	10K	5%	1/4W
R637	1-249-410-11	CARBON	270	5%	1/4W
R638	1-249-411-11	CARBON	330	5%	1/4W
R639	1-249-413-11	CARBON	470	5%	1/4W
R640	1-249-414-11	CARBON	560	5%	1/4W
R641	1-249-415-11	CARBON	680	5%	1/4W
R642	1-249-417-11	CARBON	1K	5%	1/4W
R650	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-249-410-11	CARBON	270	5%	1/4W
R652	1-249-411-11	CARBON	330	5%	1/4W
R653	1-249-413-11	CARBON	470	5%	1/4W
R654	1-249-414-11	CARBON	560	5%	1/4W
R655	1-249-415-11	CARBON	680	5%	1/4W
R656	1-249-429-11	CARBON	10K	5%	1/4W
R657	1-249-410-11	CARBON	270	5%	1/4W
R658	1-249-411-11	CARBON	330	5%	1/4W
R659	1-249-413-11	CARBON	470	5%	1/4W
R660	1-249-414-11	CARBON	560	5%	1/4W
R661	1-249-415-11	CARBON	680	5%	1/4W
R662	1-249-417-11	CARBON	1K	5%	1/4W
R663	1-249-418-11	CARBON	1.2K	5%	1/4W
R664	1-249-420-11	CARBON	1.8K	5%	1/4W
R665	1-249-422-11	CARBON	2.7K	5%	1/4W
R666	1-249-417-11	CARBON	1K	5%	1/4W
R667	1-249-417-11	CARBON	1K	5%	1/4W
R668	1-249-441-11	CARBON	100K	5%	1/4W
R669	1-249-441-11	CARBON	100K	5%	1/4W
R670	1-249-414-11	CARBON	560	5%	1/4W
R671	1-249-437-11	CARBON	47K	5%	1/4W
R672	1-249-417-11	CARBON	1K	5%	1/4W
R673	1-249-437-11	CARBON	47K	5%	1/4W
R674	1-249-417-11	CARBON	1K	5%	1/4W
R675	1-249-437-11	CARBON	47K	5%	1/4W
R676	1-249-429-11	CARBON	10K	5%	1/4W
R678	1-249-407-11	CARBON	150	5%	1/4W
R679	1-249-407-11	CARBON	150	5%	1/4W
R680	1-247-804-11	CARBON	75	5%	1/4W
R681	1-249-407-11	CARBON	150	5%	1/4W
R682	1-247-804-11	CARBON	75	5%	1/4W
R683	1-247-804-11	CARBON	75	5%	1/4W
R684	1-247-804-11	CARBON	75	5%	1/4W
R685	1-247-804-11	CARBON	75	5%	1/4W
R688	1-249-402-11	CARBON	56	5%	1/4W
R689	1-249-402-11	CARBON	56	5%	1/4W
R690	1-249-402-11	CARBON	56	5%	1/4W
R691	1-249-407-11	CARBON	150	5%	1/4W
R693	1-249-407-11	CARBON	150	5%	1/4W
R696	1-249-402-11	CARBON	56	5%	1/4W
R697	1-249-407-11	CARBON	150	5%	1/4W
R698	1-249-407-11	CARBON	150	5%	1/4W
R699	1-247-807-31	CARBON	100	5%	1/4W
R700	1-247-807-31	CARBON	100	5%	1/4W
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-249-429-11	CARBON	10K	5%	1/4W

PANEL | SENSOR | SUB TRANS

Ref. No.	Part No.	Description			Remark
R703	1-249-429-11	CARBON	10K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-401-11	CARBON	47	5%	1/4W (GRX70J: EA3)
R711	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R712	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R713	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R714	1-249-437-11	CARBON	47K	5%	1/4W (GRX70J: EA3)
R715	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R716	1-249-431-11	CARBON	15K	5%	1/4W (GRX70J: EA3)
R717	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R718	1-249-433-11	CARBON	22K	5%	1/4W (GRX70J: EA3)
R719	1-247-881-00	CARBON	120K	5%	1/4W (GRX70J: EA3)
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-249-417-11	CARBON	1K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-417-11	CARBON	1K	5%	1/4W
R725	1-249-433-11	CARBON	22K	5%	1/4W
R726	1-249-429-11	CARBON	10K	5%	1/4W
R727	1-249-431-11	CARBON	15K	5%	1/4W (GRX70J: EA3)
R728	1-247-885-00	CARBON	180K	5%	1/4W
R729	1-247-807-31	CARBON	100	5%	1/4W
R731	1-249-440-11	CARBON	82K	5%	1/4W
R732	1-249-437-11	CARBON	47K	5%	1/4W
R733	1-249-440-11	CARBON	82K	5%	1/4W
R734	1-249-417-11	CARBON	1K	5%	1/4W
R735	1-249-420-11	CARBON	1.8K	5%	1/4W
R741	1-249-421-11	CARBON	2.2K	5%	1/4W
R742	1-249-421-11	CARBON	2.2K	5%	1/4W
R743	1-249-421-11	CARBON	2.2K	5%	1/4W
		< VARIABLE RESISTOR >			
RV711	1-225-739-11	RES, VAR 50K (ECHO LEVEL) (GRX70J: EA3)			
RV712	1-225-739-11	RES, VAR 50K (MIC LEVEL)			
		< SWITCH >			
S601	1-473-534-11	ENCODER, ROTARY (JOG DIAL)			
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)			
S611	1-762-875-21	SWITCH, KEYBOARD (SYNC BASS)			
S612	1-762-875-21	SWITCH, KEYBOARD (SYNC EQ)			
S613	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON/MPX)			
S614	1-762-875-21	SWITCH, KEYBOARD (NON-STOP)			
S615	1-762-875-21	SWITCH, KEYBOARD (SURROUND)			
S616	1-762-875-21	SWITCH, KEYBOARD (DBFB)			
S617	1-762-875-21	SWITCH, KEYBOARD (ENTER/NEXT)			
S618	1-762-875-21	SWITCH, KEYBOARD (+ ►►)			
S619	1-762-875-21	SWITCH, KEYBOARD (- ◄◄)			
S620	1-762-875-21	SWITCH, KEYBOARD (GROOVE)			
S621	1-762-875-21	SWITCH, KEYBOARD (FLASH)			
S622	1-762-875-21	SWITCH, KEYBOARD (REPEAT STEREO/MONO)			
S623	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE, DOLBY NR)			
S624	1-762-875-21	SWITCH, KEYBOARD (EDIT, DIRECTION, TUNER MEMORY)			
S625	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)			
S626	1-762-875-21	SWITCH, KEYBOARD (HI-DUB)			
S627	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S628	1-762-875-21	SWITCH, KEYBOARD (LOOP)			
S629	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S630	1-762-875-21	SWITCH, KEYBOARD (SPECTRUM ANALYZER)			
S638	1-762-875-21	SWITCH, KEYBOARD (TIMER SELECT)			
S639	1-762-875-21	SWITCH, KEYBOARD (P FILE MEMORY)			
S640	1-762-875-21	SWITCH, KEYBOARD (GEQ CONTROL)			
S641	1-762-875-21	SWITCH, KEYBOARD (FILE SELECT)			
S642	1-762-875-21	SWITCH, KEYBOARD (EFFECT)			
S643	1-762-875-21	SWITCH, KEYBOARD (TUNER BAND)			
S644	1-762-875-21	SWITCH, KEYBOARD (►II CD)			
S645	1-762-875-21	SWITCH, KEYBOARD (■)			
S646	1-762-875-21	SWITCH, KEYBOARD (► TAPE B)			
S647	1-762-875-21	SWITCH, KEYBOARD (◄ TAPE B)			
S648	1-762-875-21	SWITCH, KEYBOARD (► TAPE A)			
S649	1-762-875-21	SWITCH, KEYBOARD (◄ TAPE A)			
S650	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
S651	1-762-875-21	SWITCH, KEYBOARD (CLOCK TIMER SET)			
		< VIBRATOR >			
X601	1-781-312-11	VIBRATOR, CERAMIC (12.5MHz)			
**********					
*	1-658-576-11	SENSOR BOARD **********			
		< PHOTO INTERRUPTER >			
IC702	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
		< PHOTO REFLECTOR >			
IC703	8-749-924-30	PHOTO REFLECTOR GP2S28			
		< RESISTOR >			
R701	1-249-416-11	CARBON	820	5%	1/4W
R702	1-249-407-11	CARBON	150	5%	1/4W
**********					
*	A-4417-729-A	SUB TRANS BOARD, COMPLETE (RXD80) **********			
		< CAPACITOR >			
C11	1-126-768-11	ELECT	2200uF	20%	16V
C12	1-164-159-11	CERAMIC	0.1uF		50V
C13	1-126-933-11	ELECT	100uF	20%	16V
C14	1-126-968-11	ELECT	100uF	20%	50V
C15	1-164-159-11	CERAMIC	0.1uF		50V
C16	1-126-948-11	ELECT	100uF	20%	35V
⚠C21	1-113-925-11	CERAMIC	0.01uF	20%	250V

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Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN11	1-564-321-00	PIN, CONNECTOR 2P	
* CN12	1-564-321-21	PIN, CONNECTOR 2P	
CN13	1-785-333-11	PIN, CONNECTOR (LIGHT ANGLE) 7P	
		< DIODE >	
D11	8-719-911-19	DIODE 1SS119	
D12	8-719-210-21	DIODE 11EQS04	
D13	8-719-210-21	DIODE 11EQS04	
D14	8-719-210-21	DIODE 11EQS04	
D15	8-719-210-21	DIODE 11EQS04	
D16	8-719-911-19	DIODE 1SS119	
D17	8-719-024-99	DIODE 11ES2-NTA2B	
D18	8-719-024-99	DIODE 11ES2-NTA2B	
D19	8-719-024-99	DIODE 11ES2-NTA2B	
D20	8-719-024-99	DIODE 11ES2-NTA2B	
D21	8-719-986-60	DIODE HZS27-3LTA	
D22	8-719-109-63	DIODE RD3.0ESB2	
D23	8-719-911-19	DIODE 1SS119	
		< IC >	
IC11	8-759-450-47	IC BA05T	
		< TRANSISTOR >	
Q11	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q12	8-729-040-19	TRANSISTOR RT1N137L-TP	
Q13	8-729-118-01	TRANSISTOR 2SB1116	
Q14	8-729-040-19	TRANSISTOR RT1N137L-TP	
Q15	8-729-040-19	TRANSISTOR RT1N137L-TP	
Q16	8-729-900-63	TRANSISTOR DTA124ES	
Q17	8-729-900-63	TRANSISTOR DTA124ES	
		< RESISTOR >	
R11	1-249-429-11	CARBON 10K 5% 1/4W	
R12	1-249-441-11	CARBON 100K 5% 1/4W	
R13	1-249-417-11	CARBON 1K 5% 1/4W	
R15	1-249-429-11	CARBON 10K 5% 1/4W	
R16	1-247-807-31	CARBON 100 5% 1/4W	
R17	1-247-807-31	CARBON 100 5% 1/4W	
R18	1-247-807-31	CARBON 100 5% 1/4W	
R19	1-249-427-11	CARBON 6.8K 5% 1/4W	
R20	1-249-429-11	CARBON 10K 5% 1/4W	
R23	1-249-427-11	CARBON 6.8K 5% 1/4W	
		< RELAY >	
⚠RY11	1-755-276-11	RELAY, POWER	
		< TRANSFORMER >	
⚠T11	1-433-587-11	TRANSFORMER, POWER	
**********			
*	1-672-369-11	TRANS BOARD	
	**********		
	1-533-217-31	HOLDER, FUSE	

Ref. No.	Part No.	Description	Remark
		< CAPACITOR >	
⚠C952	1-162-306-11	CERAMIC 0.01uF 20% 16V (GRX70J)	
C971	1-128-563-11	ELECT 100uF 20% 100V (GRX70/GRX70J)	
C972	1-126-960-11	ELECT 1uF 20% 50V (GRX70/GRX70J)	
C973	1-126-948-11	ELECT 100uF 20% 35V (GRX70/GRX70J)	
		< CONNECTOR >	
CN951	1-564-321-00	PIN, CONNECTOR 2P (GRX70/GRX70J)	
* CN952	1-564-527-11	PLUG, CONNECTOR 12P (GRX70/GRX70J)	
* CN952	1-564-524-11	PLUG, CONNECTOR 9P (RXD80)	
CN953	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P (GRX70/GRX70J)	
		< DIODE >	
D971	8-719-024-99	DIODE 11ES2-NTA2B (GRX70/GRX70J)	
D972	8-719-986-60	DIODE HZS27-3LTA (GRX70/GRX70J)	
D973	8-719-109-63	DIODE RD3.0ESB2 (GRX70/GRX70J)	
		< FUSE >	
⚠F951	1-532-506-31	FUSE T6.3AL/250V (GRX70: E2, E3, SP, TW, AR/GRX70J)	
⚠F951	1-533-310-11	FUSE, GLASS TUBE 6.3A/125V (RXD80)	
⚠F961	1-532-505-31	FUSE T5AL/250V (GRX70/GRX70J)	
⚠F962	1-532-505-31	FUSE T5AL/250V (GRX70/GRX70J)	
⚠F963	1-532-506-31	FUSE T6.3AL/250V (GRX70/GRX70J)	
⚠F964	1-532-506-31	FUSE T6.3AL/250V (GRX70/GRX70J)	
		< TRANSISTOR >	
Q971	8-729-048-52	TRANSISTOR 2SA1932 (TP) (GRX70/GRX70J)	
		< RESISTOR >	
⚠R951	1-219-120-11	FUSIBLE 0.15 5% 1/4W F (RXD80)	
⚠R951	1-219-122-91	FUSIBLE 0.33 5% 1/4W F (GRX70/GRX70J)	
⚠R952	1-219-122-91	FUSIBLE 0.33 5% 1/4W F (RXD80)	
⚠R952	1-219-120-11	FUSIBLE 0.15 5% 1/4W F (GRX70/GRX70J)	
⚠R953	1-219-119-81	FUSIBLE 0.1 5% 1/4W F	
⚠R961	1-202-725-00	SOLID 3.3M 10% 1/2W (RXD80)	
⚠R971	1-216-456-00	METAL OXIDE 820 5% 2W F (GRX70/GRX70J)	
R972	1-249-429-11	CARBON 10K 5% 1/4W (GRX70/GRX70J)	
R973	1-249-429-11	CARBON 10K 5% 1/4W (GRX70/GRX70J)	
R974	1-247-807-31	CARBON 100 5% 1/4W (GRX70/GRX70J)	
R975	1-247-807-31	CARBON 100 5% 1/4W (GRX70/GRX70J)	

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TRANS

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
⚠S951	1-771-291-11	SWITCH, POWER (VOLTAGE SELECTOR) (GRX70: E2, E3, SP, TW, AR/GRX70J)	
		< TRANSFORMER >	
⚠T951	1-433-561-11	TRANSFORMER, POWER (GRX70/GRX70J)	
⚠T951	1-433-562-21	TRANSFORMER, POWER (RXD80)	
**********			
		MISCELLANEOUS **********	
64	1-773-188-11	WIRE (FLAT TYPE) (23 CORE)	
104	1-773-042-11	WIRE (FLAT TYPE) (17 CORE) (14cm) (GRX70: E3, TW, AR, AUS/RXD80)	
104	1-773-043-11	WIRE (FLAT TYPE) (17 CORE) (15cm) (GRX70: E2, SP, TH, MX/GRX70J)	
105	1-773-024-11	WIRE (FLAT TYPE) (15 CORE) (32cm)	
106	1-783-570-11	WIRE (FLAT TYPE) (19 CORE)	
109	1-769-977-11	WIRE (FLAT TYPE) (13 CORE) (GRX70: E2, TH, MX, AR, AUS/ RXD80)	
109	1-773-009-11	WIRE (FLAT TYPE) (15 CORE) (15cm) (GRX70: E3, SP, TW/GRX70J)	
110	1-233-544-14	TUNER PACK (RXD80)	
110	1-233-545-11	TUNER (FM/AM) (GRX70: TH, AUS)	
110	1-233-545-14	TUNER PACK (GRX70: MX, AR)	
110	1-233-546-11	TUNER (FM/MW/SW) (GRX70: E3, SP, TW/ GRX70J)	
110	1-693-453-11	TUNER (FM/AM) (GRX70: E2)	
⚠111	1-575-651-11	CORD, POWER (GRX70: SP, TW/GRX70J: EA3)	
⚠111	1-575-653-11	CORD, POWER (GRX70: E2, E3, TH, MX/ GRX70J: E3)	
⚠111	1-690-608-11	CORD, POWER (GRX70: AUS)	
⚠111	1-690-609-21	CORD, POWER (RXD80: CND)	
⚠111	1-783-941-21	CORD, POWER (GRX70: AR)	
⚠112	1-569-007-11	ADAPTOR, CONVERSION 2P (GRX70: E3/GRX70J: E3)	
⚠112	1-569-008-21	ADAPTOR, CONVERSION 2P (GRX70: SP, TW/GRX70J: EA3)	
257	1-452-925-21	MAGNET ASSY	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
HP101	A-2056-681-A	DECK (A) ASSY, HEAD	
HRPE101	A-2056-682-A	DECK (B) ASSY, HEAD	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M501	1-698-792-11	FAN, DC	
M701	A-4672-004-A	MOTOR ASSY (DISC TRAY TURN)	
M801	A-4672-004-A	MOTOR ASSY (DISC TRAY SLIDE)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	
⚠T11	1-433-587-11	TRANSFORMER, POWER (RXD80)	
⚠T951	1-433-561-11	TRANSFORMER, POWER (GRX70/GRX70J)	
⚠T951	1-433-562-21	TRANSFORMER, POWER (RXD80)	
**********			

Ref. No.	Part No.	Description	Remark
		********** HARDWARE LIST **********	
#1	7-685-872-09	SCREW +BVTT 3X8 (S)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#5	7-685-852-04	SCREW +BVTT 2X5 (S)	
#6	7-685-861-01	SCREW +BVTT 2.6X5 (S)	
#7	7-685-851-04	SCREW +BVTT 2X4 (S)	
#8	7-621-775-10	SCREW +B 2.6X4	
#9	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#10	7-685-880-09	SCREW +BVTT 4X6 (S)	
#11	7-628-254-15	SCREW +PS 2.6X6	
#12	7-628-254-50	SCREW +PS 2.6X16	

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99D057030-1
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